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Cooperative **ECONOMIC INSECT REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

GRASSHOPPER hatch continues to progress; nymphs numerous in local areas of Utah, Colorado, Wyoming and Texas. (p. 509). ALFALFA WEEVIL larval damage heavy to untreated alfalfa in parts of Virginia, Maryland, New Jersey, Rhode Island, Massachusetts, Colorado and Nevada. (pp. 509, 510, 535). CORN FLEA BEETLE relatively abundant in parts of Kansas, Maryland, Delaware and Pennsylvania. (p. 511). ARMYWORM counts high on wheat and barley in southeast Missouri and outbreak reported on oats and wheat in Calhoun County, South Carolina. (p. 513). BLACK CUTWORM damage reported in local areas of Kansas and Missouri, and EUROPEAN CORN BORER adult flights underway in Delaware. First generation of latter species expected to be light in Illinois. (p. 514). Infestations of THRIPS light to moderate on peanuts in several Georgia counties and beginning to damage field corn on Eastern Shore of Maryland. (p. 515).

CODLING MOTH flights reported in a number of states from Utah to New York. (p. 515). FRUIT-TREE LEAF ROLLER outbreak severe throughout Missouri. (p. 516). EUROPEAN RED MITE becoming more active; some damage beginning to appear locally. May be troublesome in some areas. (pp. 517-518). PECAN NUT CASEBEARER treatments underway in most areas of Texas. (p. 518). CITRUS INSECTS at low level generally in Florida, but increasing trend for CITRUS RUST MITE, CITRUS RED MITE, TEXAS CITRUS MITE and BLACK SCALE expected in June. (pp. 518-519).

COLORADO POTATO BEETLE locally heavy on potatoes in Oklahoma, Alabama and Delaware, and MEXICAN BEAN BEETLE moderate to heavy in Alabama and heavy in Coffee County, Georgia. (p. 520). WIREWORMS caused considerable damage to tobacco in areas of North and South Carolina. (p. 522).

A BLACK FLEAHOPPER (Spanogonicus albofasciatus) considerably lower on cotton in central Arizona than at same time in 1961; however, combinations of fleahoppers and lygus bugs causing 50 percent loss of squares in many fields. (p. 523). Treatments for THRIPS being applied on cotton in several states, but populations not generally high. (pp. 523-524).

EUROPEAN PINE SHOOT MOTH found in large numbers on ornamentals in residential area of Whatcom County, Washington. (p. 525). CANKERWORMS feeding heavily in parts of Wisconsin, Missouri, Illinois, New York, Connecticut and New Jersey. (p. 526). ELM LEAF BEETLE larvae causing considerable damage to elms in parts of Oklahoma and Texas; also active in Idaho, Utah, Colorado, Arkansas and Illinois. (pp. 526-527). GYPSY MOTH defoliation expected to be 50 percent on 60,000 acres in 3 Massachusetts counties. (p. 535). BIRCH LEAF MINER laying eggs in several Eastern States. (p. 527).

BLACK FLIES abundant and a nuisance in areas of Kansas, Nebraska, Missouri, Wisconsin and Rhode Island. (p. 530). Several species of TICKS a problem in various areas of the country. (pp. 531, 535).

PERIODICAL CICADA activity reported heavy in Baton Rouge area of Louisiana, and continued emergence noted in the East. WESTERN HARVESTER ANT becoming a serious pest on range and farmland in Tooele County, Utah. (p. 533).

DETECTION

A SAND FLY (Culicoides blantonii) found for first time in United States in Cameron County, Texas. (p. 529). New state records were a CRESCENT-GALL POPLAR APHID

(continued on page 508)

(Cornaphis populi) in Utah and an ARMORED SCALE (Aspidiotus diffinis) in Florida. (p. 525). New county records were ALFALFA WEEVIL in Wise and Buchanan Counties, Virginia (p. 509); CLOVER ROOT BORER in La Salle County, Illinois (p. 510); EUROPEAN PINE SAWFLY in Perry County, Indiana (p. 525); and LESSER GRAIN BORER in Clark County, Nevada (p. 532).

CORRECTIONS and ADDITIONAL NOTES

See page 534 for corrections and pages 534 and 535 for additional notes (California and Massachusetts).

SPECIAL REPORTS

Status of the screw-worm (Cochliomyia hominivorax) in the Southwest, May 4-17. Infestations now present throughout southern, central and western Texas; 5 New Mexico counties; and in one county in Oklahoma and one parish in Louisiana. (p. 538).

Status of Some Important Insects in the United States. (plum curculio). (p. 539).

Insects Not Known to Occur in the United States. (swede midge (Contarinia nasturtii)). (p. 541).

Reports in this issue are for week ending May 18, unless otherwise indicated.

WEATHER OF THE WEEK ENDING MAY 21

A broad high pressure system kept skies mostly sunny and led the way for unusually high temperatures over the eastern half of the Nation. A large area from Chicago, Illinois, over Lower Michigan and into central New York State had averages of 20° above normal and many stations from the Gulf to the Great Lakes observed record highs. Parkersburg, West Virginia, had 6 consecutive days of record breaking temperatures, with one highest for so early in season. A 96° maximum on the 18th at Allentown, Pennsylvania, was the highest recorded there since 1944 when records began, but this record was exceeded by 1° on the 19th. The mercury rose to 98° at Putnam, Connecticut, and set a May record for the entire State. Beginning on the 14th, temperature records for highest so early in season were set at Detroit City Airport, Michigan, on 5 consecutive days. Farther west, Iowa observed its 5th consecutive week of above normal temperature averages. On the cool side, temperatures averaged below normal in North Dakota and all states west and south of Montana. The area of largest departures, ranging up to 12°, included interior California, most of Nevada, and southern interior Oregon. In the East, very few freezing temperatures were recorded, while the 32° mark was more common over the higher elevations of the Far West. During the period, many areas needing precipitation received ample amounts, while others remained dry, some critically short of moisture. A prolonged dry spell in the northern and central Great Plains ended when a frontal system stretching northward and southward across the country left generally over 2.00 inches from North Dakota and Minnesota down into much of Kansas. Thundershowers were fairly common throughout this area and locally heavy amounts of rainfall were observed. Iroquois, South Dakota, received 6.23 inches and, in the same State, Wood garnered 5.23 inches of rain.

In Nebraska, torandoes, winds, hail and local flooding caused personal injury and property damage. Near Rushville, swollen streams were jammed by ice from hail and 5 inches of hail fell at Springview. Sunday night, 5.00 inches of rain fell at Harlan, Iowa, and in Missouri, most of which had a rainless week, Sikeston received 5.00 inches during a severe thunderstorm on Friday. Near Castana, Iowa,

(weather continued on page 524)

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - UTAH - Very serious outbreak appears to be developing in Juab County, especially in Nephi-Levan area. Hatching observed in areas of Tooele County and some hatching occurred in Delta-Deseret area of Millard County, with small numbers of winged Trimerotropis sp. active throughout State. (Knowlton). COLORADO - Grasshopper nymphs numerous in areas of Huerfano County; counts 4 or more per square yard made in strong wind. Populations presently appear to be following pattern indicated by 1961 fall adult survey. (Jenkins). WYOMING - Following species completed main hatch and are in first and second instars in Platte County as of May 9-11: Aulocara ellioti, Cordillacris occipitalis and Amphitornus coloradus. Following species just beginning to hatch as of May 9-11: Trachyrhachis kiowa and Melanoplus occidentalis. Heavy infestations found in Crook County in areas near Hulett; counts averaged 15 per square yard. (Pfadt). MONTANA - No reports of grasshopper hatching received to May 17. (Roemhild). NORTH DAKOTA - First instars of Ageneotettix deorum found in areas of McKenzie County; counts averaged 5 per square yard. (Wilson, Brandvik). SOUTH DAKOTA - First instars of Melanoplus differentialis and M. bivittatus found in north central region of State; populations low (hatching just started). (Hintz). KANSAS - Few first and second instars of Melanoplus spp. noted in southeastern and east central areas; counts less than 1 per square yard. (Peters). OKLAHOMA - Light grasshopper populations, 0-10 per square yard, in Roger Mills County, west central area, on rangeland and soil bank lands. First and second instars light along roadside and rangeland areas in south central part of State. Counts 3-6 per 10 sweeps in margin of alfalfafield in Garvin County, south central area. (Okla. Coop. Sur.). TEXAS - Heavy, local infestation of nymphs of unidentified grasshoppers began to appear in Knox County about May 1. (Moore). ILLINOIS - First instars of Melanoplus spp. found as far north as Whiteside County in very small numbers. (Ill. Ins. Rpt.). WISCONSIN - Eggs of Melanoplus femurrubrum coagulated generally in central and western parts of State. M. bivittatus hatched along roadsides in Adams County where this species was economically important in 1961. M. sanguinipes (migratory grasshopper) nymphs not yet appeared in alfalfa, but occasionally seen along roadsides and in wastelands in central and western areas. (Wis. Ins. Sur.). OREGON - Camnula pellucida hatched by May 13. (Jackson).

ALFALFA WEEVIL (Hypera postica) - VIRGINIA - Spotted, severe infestations on alfalfa in Wise County (McCormick, May 4) and first severe attack reported in Buchanan County (Woods). These are new county records; only county in State not known to be infested is Sussex. (Tarpley). Moderate to severe on Ladino clover on farm in Hanover County. (Sanders). Larvae light on cutover alfalfa and Ladino clover adjacent to alfalfa locally in King and Queen County (Rowell, Sedivy) and infesting Ladino clover locally in Isle of Wight County (Amos, Grizzard, May 8). MARYLAND - Heavy larval injury resulted to untreated alfalfa in Carroll, Dorchester and Queen Annes Counties. Pupation underway on Eastern Shore. (U. Md., Ent. Dept.). NEW JERSEY - Untreated fields in central area showing considerable damage. (Ins.-Dis.-Weed Newsltr., May 15). PENNSYLVANIA - First instars present and eggs readily found in Cumberland County alfalfa on May 12. (Negley). Not yet abundant in Juniata and Indiana Counties and possibly less than last year in Blair County. (Udine). CONNECTICUT - Eggs, larvae and adults reported from North Haven, Seymour, Meriden and Wallingford; larval feeding begun. (Kemmerer, Savos). RHODE ISLAND - Adults and young larvae very heavy in field in North Kingstown, Washington County; heavy feeding evident. (Mathewson). COLORADO - Larval counts 10-100 per 100 sweeps in Prowers, Bent, Elbert, Mesa and Montrose Counties. Where high counts occur, early cutting of alfalfa may be necessary. (Bulla, Schweissing, Jenkins). UTAH - Larvae show substantial Bathyplectes curculionis parasitism in Tooele-Grantsville area, Tooele County, alfalfa; counts 9-39 per 10 sweeps at Grantsville. Two thousand acres stubble treated this spring in Tooele County for weevil control. (Knowlton). WYOMING - Adults averaged 15 per 100 sweeps in alfalfa in Goshen and Sheridan Counties and 12 per 100 sweeps in Niobrara, Weston, Crook and Campbell Counties. (Fullerton). IDAHO - Adults found occasionally in alfalfa in Lewiston Orchards.

Alfalfa about 10-14 inches high. Larvae commonly in first and second stages. (Kambitsch, Portman). NEVADA - First instars present in Currant, Nye County. (Lauderdale). Larvae abundant, with heavy damage occurring in Alamo-Hiko area, Lincoln County; first time in 7-8 years that species has caused so much damage in area. (Christensen).

CLOVER LEAF WEEVIL (Hypera punctata) - MISSOURI - Counts in alfalfa in northeast ranged 5-9 larvae per square foot. Several dead larvae observed in each field checked and live larvae discolored by a fungus. (Munson, Thomas, Wood).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - MARYLAND - Larvae heavily infesting bracts and axils and buds of red clover in Howard and Queen Annes Counties. (U. Md., Ent. Dept.). OHIO - Adults averaged 5 per 100 sweeps on red clover in Wayne County, May 15. (Sechriest). ILLINOIS - Adults varied 0-25 and averaged 2.5 per 100 sweeps in alfalfa and clover in northeast and 0-80 and averaged 18.3 in east. Larvae infesting 0-30, average 12.7, percent of stems in northeast and 30-40, average 37.5, percent in east. (Ill. Ins. Rpt.).

CLOVER ROOT CURCULIO (Sitona hispidula) - IDAHO - Adults averaged 1 per 2 sweeps in alfalfa east of Lewiston Orchards. (Portman). Averaged 1 per sweep in Cottonwood Creek area along Clearwater River. (Halfhill). UTAH - Make up 5 percent of adult weevils, 4-27 per 10 sweeps, in alfalfa at Richmond, Cache County. Larvae now starting to cause damage in Cache, Tooele and Salt Lake County alfalfa. (Knowlton).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - UTAH - Conspicuously notching leaves in parts of Cache Valley. (Knowlton). NEBRASKA - Adults averaged 4 per 10 sweeps in sweetclover in Clay County. (Bergman). One adult per sweep in Hall County sweetclover. (Manglitz). NORTH DAKOTA - Adults 5-25 per 10 sweeps in Richland and Sargent Counties. (N. D. Ins. Sur.).

A WEEVIL (Sitona scissifrons) - SOUTH DAKOTA - Counts 10-230 per 100 sweeps in alfalfa in northeastern and north central areas. (Hintz).

A WEEVIL (Tychius stephensi) - ILLINOIS - Collected in clover in Bureau County, May 16; first observation of season. (Ill. Ins. Rpt.).

RICE WATER WEEVIL (Lissorhoptrus oryzophilus) - ARKANSAS - Adults quite active; feeding signs easily seen on rice blades. (Ark. Ins. Sur.).

VETCH BRUCHID (Bruchus brachialis) - TEXAS - Egg-laying activity declining rapidly in Brazos-Burleson County areas; vetch maturing rapidly. (Randolph).

CLOVER ROOT BORER (Hylastinus obscurus) - ILLINOIS - Two adults collected in La Salle County, May 16; first observation of season and apparently a new county record. (Ill. Ins. Rpt.). PENNSYLVANIA - Adults and eggs in mines in clover roots in Juniata County; about 2 adults per root. (Udine).

WIREWORMS - WYOMING - Few scattered light infestations of Limonius spp. found in wheat fields in Goshen County; counts averaged less than 1 per square foot. Few corn fields in Goshen and Weston Counties lightly damaged; counts in damaged fields averaged 1 per square foot. (Fullerton). SOUTH DAKOTA - Small numbers, 1 or 2 per 100 sweeps, present in cereal crops throughout northern area. (Hintz).

A CARABID (Clivina sp.) - COLORADO - Fed on seed corn in field in Boulder County; replanting necessary. (Bliss).

A TENEBRIONID (Blapstinus substriatus) - MONTANA - Heavy populations found in winter wheat in eastern Teton and northern Cascade Counties; damage negligible. Severe damage to wheat occurred in this area in 1931. Insect then called "wheat leaf beetle." (Roemhild).

CORN FLEA BEETLE (Chaetocnema pulicaria) - MARYLAND - Adults averaged 3 per plant, with foliage injury evident in 3 acres of sweet corn at Jessup, Howard County. (U. Md., Ent. Dept.). DELAWARE - Adults rather common on corn in Sussex County. (Burbutis). PENNSYLVANIA - Adults fairly abundant on sweet corn in York County. (Pepper). NEW YORK - Populations remain phenomenally scarce; counts on 11,000 corn plants in Hudson Valley yielded only 1 plant in 600 with feeding injury, May 11. (N. Y. Wkly. Rpt.) KANSAS - Relatively abundant in Montgomery County, southeast area. (Burkhardt).

DESERT CORN FLEA BEETLE (Chaetocnema ectypa) - UTAH - Increasing on corn and related feed grains in Washington County. (Knowlton).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OKLAHOMA - Light on alfalfa in Duncan vicinity, southwest area. (Okla. Coop. Sur.).

GREEN JUNE BEETLE (Cotinis nitida) - VIRGINIA - Severely infesting pastures on farm near New Castle, Craig County; now mostly in pupal stage. (Rowell).

PEA APHID (Macrosiphum pisi) - ARIZONA - Infestations declined; low in alfalfa in all areas. (Ariz. Coop. Sur.). NEW MEXICO - Very light in Taos County alfalfa. (N. M. Coop. Rpt.). TEXAS - Declined to noneconomic populations on vetch in Brazos and Burleson Counties. (Randolph). OKLAHOMA - Considerably reduced in alfalfa throughout south central and southwest areas; counts ranged 50-500 per 10 sweeps in south central area. (Okla. Coop. Sur.). KANSAS - Counts in east central and southeast areas ranged 0-20,000 and averaged less than 100 per 100 sweeps. Over 50 percent of alfalfa has had first cutting removed; pea aphid problem reduced. Predator counts also high in these areas. (Peters). COLORADO - Low on alfalfa; counts 1-200 per 100 sweeps in Prowers, Elbert, Mesa, Delta, Montrose and Garfield Counties. (Bulla, Jenkins). NEBRASKA - Ranged 2-90 and averaged 30 per 10 sweeps in counties bordering Kansas from Nuckolls County west to the Colorado border week ending May 11. (Jarvis). Ranged 0-27 per 10 sweeps in central and northern areas week ending May 11. (Calkins). Light in alfalfa in southern, central and southwestern areas, averaging 15 per sweep. (Bergman). WYOMING - Counts averaged 60 per 100 sweeps in Goshen County and 25-30 per 100 sweeps in Niobrara, Weston, Crook, Campbell and Sheridan Counties. (Fullerton). IDAHO - Counts 5-10 per sweep in alfalfa in Lewiston Orchards area and 1-2 per sweep in alfalfa east of Lewiston Orchards. Running 2-3 per sweep in Lapwai area and Clearwater River area near Cottonwood Creek. In area east of Lewiston Orchards, approximately 15 percent of aphids alates. (Halfhill, Kambitsch, Portman). NORTH DAKOTA - Counts 2-50 per 10 sweeps in southern Richland and Sargent Counties. (N. D. Ins. Sur.). WISCONSIN - Wingless forms averaged 15 per sweep in southern and southeastern areas of State and extending northward as far as Washington and central Dodge Counties. In northern portion of Dodge County and in Ozaukee, Sheboygan, Manitowoc, Fond du Lac and Green Lake Counties, counts averaged 2 per sweep. Only an occasional winged form found. Counts averaged about 6 per sweep in Pepin, Buffalo, Trempealeau, La Crosse and Adams Counties and about 13 per sweep in Marquette and Juneau Counties. (Wis. Ins. Sur.). ILLINOIS - Counts vary from 2 to 500 and average 35 per sweep in clover and alfalfa in northern three-fourths of State. Most fields have less than 50 per sweep, with disease and predators fairly abundant. Occasional fields which apparently escaped heavy rains and are fairly dry, show little signs of disease and some lack predators. Latter fields have fairly high populations and may require treatment if not harvested within next week or two. (Ill. Ins. Rpt.). PENNSYLVANIA - Abundant to very abundant on alfalfa in Juniata, Blair and Indiana Counties, but many predators and parasites active. (Udine). Fairly abundant in all alfalfa fields in Franklin, Adams and York Counties; no injury noticeable. (Pepper). MARYLAND - Remains at economic levels on alfalfa in most sections; averaged 400 per sweep in Queen Annes County. Generally declining, however, due to a fungus, parasites and predators. (U. Md., Ent. Dept.). NEW JERSEY - Alfalfafield in Burlington County had approximately 300 per sweep; several others in county had 50-100 per sweep. (Ins.-Dis.-Weed Newsltr., May 15). RHODE ISLAND - Very heavy in alfalfa infested with alfalfa weevil in North Kingstown, Washington County. Lady beetles also common. (Mathewson).

SPOTTED ALFALFA APHID (Therioaphis maculata) - SOUTH DAKOTA - Populations increased to 94 per 100 sweeps in Gregory County. Also found in Bon Homme County. (Walstrom). NEBRASKA - Ranged 0-3 per 10 sweeps in northern and central areas, with populations as high as 15 per 10 sweeps in Howard County during week ending May 11. (Calkins). None found in south and southwest areas. (Jarvis, Bergman). KANSAS - Found only on a roadside embankment in Montgomery County, southeast area. (Peters). OKLAHOMA - Despite dry, hot weather, populations remain low. Counts ranged 30-50 per 10 sweeps in Bryan County to 150 per 10 sweeps in Murray County, south central area. Counts 80 per 10 sweeps in Stephens County, southwest area. (Okla. Coop. Sur.). TEXAS - Heavy, local infestations in Glasscock County, western area, have caused 18-inch tall alfalfa to lose bottom half of leaves. (Werst). Very light in Brazos and Burleson Counties; difficult to find. (Randolph). IDAHO - Spring surveys on alfalfa in fields infested last fall negative. (Kambitsch, Portman).

GREENBUG (Toxoptera graminum) - SOUTH DAKOTA - Continues to average about 5-10 per plant in small grains in Clay, Turner and Lincoln Counties. Rains and predators (lady beetles) apparently prevented a more rapid buildup of populations. (Orlob, Fisher). NEBRASKA - Light, 1 per 10 sweeps, on wheat in southwestern area. (Bergman). COLORADO - Light on wheat in southeastern and eastern areas. (Jenkins). TEXAS - Spotted infestations in Sherman County, high plains area, practically disappeared as wheat is maturing rapidly. (Goule). WISCONSIN - None observed. (Wis. Ins. Sur.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - MARYLAND - Ranged 10-70 per sweep on barley and other small grains in Howard, Talbot and Dorchester Counties. (U. Md., Ent. Dept.). WISCONSIN - Remains static; counts in oats ranged 1-2 per 100 sweeps although few fields of advanced grain averaged as high as 15 per 10 sweeps. (Wis. Ins. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Light in Johnson grass, 10-60 percent of terminals infested. None found in grain sorghum seedlings, with only occasional winged individuals observed on corn throughout south central area. (Okla. Coop. Sur.).

CLOVER APHID (Anuraphis bakeri) - MARYLAND - Clusters numerous on stems of red clover in Queen Annes and Howard Counties. Control recommended. (U. Md., Ent. Dept.).

TARNISHED PLANT BUG (Lygus lineolaris) - MARYLAND - Nymphs averaged 2-5 per sweep on red clover in Howard and Queen Annes Counties. (U. Md., Ent. Dept.). RHODE ISLAND - Common in alfalfafield in North Kingstown, Washington County. (Mathewson). WISCONSIN - Adults ranged 1-2 per sweep in alfalfa; few nymphs appearing. (Wis. Ins. Sur.). OKLAHOMA - Populations 25-30 per 10 sweeps on alfalfa in Garvin County; lighter in other south central areas. (Okla. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Infestations continue to increase in alfalfa statewide. (Ariz. Coop. Sur.). COLORADO - Increasing numbers of nymphs being found on alfalfa. Adults and nymphs range 10-100 per 100 sweeps in Prowers, Elbert and Mesa Counties. (Bulla, Jenkins). WYOMING - Nymphs averaged 30 per 100 sweeps in Goshen and Sheridan Counties and 20 per 100 sweeps in Niobrara, Weston, Crook and Campbell Counties. (Fullerton). UTAH - L. elisus and Lygus spp. numerous, including nymphs and some new adults, on mustards in alfalfa fields in Delta-general area of west Millard County. (Knowlton).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - KANSAS - Counts in alfalfa in southeast and east central areas ranged 0-2,000 and averaged 5 per 100 sweeps. (Peters). WYOMING - Adults averaged 25 per 100 sweeps in alfalfa in Weston, Crook, Campbell and Sheridan Counties. None found in Niobrara and Goshen Counties. (Fullerton).

RAPID PLANT BUG (Adelphocoris rapidus) - WISCONSIN - First specimen of season found in alfalfafield in Green Lake County. (Wis. Ins. Sur.).

A MIRID (Labops hesperus) - WYOMING - Severe infestation of adults damaging one winter wheat strip south and west of Yoder in Goshen County; counts averaged 3,000 per 100 sweeps. An infestation also found damaging range near Hulett in Crook County. (Fullerton). IDAHO - Infesting intermediate wheatgrass in Weiser area. (Hackler).

CHINCH BUG (Blissus leucopterus) - ALABAMA - Extremely heavy on corn in Baldwin-Mobile County area. (Seibels).

FALSE CHINCH BUGS (Nysius spp.) - TEXAS - Nysius sp. beginning to migrate in light numbers into alfalfa from wheat fields in Cooke County, north central area. (Turney). N. californicus caused considerable wilting of alfalfa in Blanco County, south central area, in April. (Texas Coop. Rpt., Massey).

MEADOW SPITTLEBUG (Philaenus spumarius) - WISCONSIN - Spittle masses appear to be scarce throughout southeast, south and eastern portions of State. Few fields showed as high as 1 nymph per 10 stems, but these fields generally rare. (Wis. Ins. Sur.). ILLINOIS - Generally very low in northern one-half of State; varied 0-136 and averaged 17.6 nymphs per 100 stems in clover and alfalfa. (Ill. Ins. Rpt.). INDIANA - Nymphs ranged 0-8 per 100 stems in clover and alfalfa in south-west area. (Matthew). MARYLAND - Nymphal populations ranged 8-17 per 10 stems on red clover in Howard and Queen Annes Counties. (U. Md., Ent. Dept.). VIRGINIA - Infesting alfalfa locally in Craig County. (Rowell).

POTATO LEAFHOPPER (Empoasca fabae) - MISSOURI - Counts in alfalfa 0-16 per sweep in northeast; all adults. (Munson, Thomas, Wood). ILLINOIS - Populations of adults in alfalfa or alfalfa-clover-grass mixtures per 100 sweeps averaged 33 in northwest, 136 in northeast, 444 in west, 176 in central, 183 in east and 487 in west-southwest. Range per 100 sweeps was 13-67 in northwest, 40-440 in northeast, 14-1740 in west, 9-620 in central, 20-468 in east and 210-860 in west-southwest. (Ill. Ins. Rpt.).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - SOUTH DAKOTA - Small numbers found on small grains in northeast and north central areas; counts 10-60 per 100 sweeps. (Hintz).

ARMYWORM (Pseudaletia unipuncta) - MISSOURI - High counts, 3-15 per square foot, reported on wheat and barley in southeast area; controls being applied. (French, Harrendorf). Some small larvae observed in dense wheat, barley and fescue throughout northern area. (Munson, Thomas, Wood). ARKANSAS - Some infestations remain in northeast on small grains, primarily wheat. No reports of activity in central and southern areas. In northeastern area, variegated cutworm (Peridroma saucia) associated with armyworm. Some infestations of armyworm on young rice prior to flooding reported. Larval size and distribution indicate that egg deposition occurred in the field and no larvae migrated in. (Ark. Ins. Sur.). SOUTH CAROLINA - Outbreak reported on 500 acres of oats and wheat in Calhoun County. (Nettles et al.). VIRGINIA - Light larval infestations on oats in Charles City County. (Settle, May 11). MARYLAND - Surveys in small grains in central and southern sections on May 15, 16 and 17 negative. (U. Md., Ent. Dept.).

FALL ARMYWORM (Laphygma frugiperda) - FLORIDA - Infesting sweet corn at Belle Glade, Palm Beach County. (Smith).

ALFALFA CATERPILLAR (Colias eurytheme) - NORTH DAKOTA - First adults of season observed in alfalfafield in Richland County. (N. D. Ins. Sur.). SOUTH DAKOTA - Collected from Codington and Marshall Counties; counts 20-30 per 100 sweeps. (Hintz).

CORN EARWORM (Heliothis zea) - TEXAS - From 5-12 percent of young corn plants in Brazos County, central area, infested with budworms. (Randolph). OKLAHOMA - Very light, scattered populations, 0-1 per 10 sweeps, in alfalfa in Garvin County area. (Okla. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Light, 1-3 per 10 sweeps, in alfalfa in Garvin, Murray and Bryan Counties, south central area. (Okla. Coop. Sur.).

ARMY CUTWORM (Chorizagrotis auxiliaris) - MONTANA - Scattered, light infestations reported from Richland, Rosebud, Roosevelt, Prairie, Chouteau and Cascade Counties. No large outbreak areas reported to May 17. (Roemhild). WYOMING - Larval infestations still being found in alfalfa and wheat in Goshen, Sheridan, Niobrara, Weston, Crook and Campbell Counties. However, damage in these counties has been light. (Fullerton). NORTH DAKOTA - Heavy infestation, 25 larvae per square yard, reported from Adams County. (Colberg).

BLACK CUTWORM (Agrotis ipsilon) - KANSAS - Infestations in river bottomland in Neosho County, southeast area; ranged from less than 1 to over 75 percent of young corn plants infested. Larvae appear to be near full grown. Approximately 100 acres of infested corn disked up and will be replanted. (Peters). MISSOURI - Light infestations throughout northern area; few isolated spots of damage reported from southeast area. (Thomas, Munson, Wood).

BRONZE CUTWORM (Nephelodes emmedonia) - VIRGINIA - Severe infestation in a lawn in Crewe, Nottoway County. (Tarpley, Cassell, May 7).

DINGY CUTWORM (Feltia subgothica) - MISSOURI - Light infestations throughout northern area; few isolated spots of damage reported from southeast. (Munson, Thomas, Wood).

CUTWORMS - NEVADA - Damaging alfalfa in Elko-Carlin areas, Elko County. (Earnish, Maloney, Menke). COLORADO - Caused considerable damage to some fields of wheat in Baca County. (Doherty). KANSAS - Cornfield replanted in Marshall County, northeast area. Damage believed to be caused by these insects. (Burkhardt). INDIANA - Causing damage to early planted corn in occasional fields in southern counties. Damage particularly heavy in few fields of early planted sweet corn. (Matthew).

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - First adult flight of season in full swing as evidenced by large numbers collected (50) in black light trap on May 14 and 15 in Sussex County. Egg masses now fairly common on weeds in Sussex and Kent Counties. (Burbutis). NEW JERSEY - Pupation 20 percent in old corn stalks in Burlington County. (Ins.-Dis.-Weed Newsltr., May 15). ILLINOIS - Very warm weather, with temperatures reaching the high 80's and low 90's has caused very rapid pupation. Average percent pupation by districts as follows: Northwest - 16, northeast - 23.3, west - 20, central - 52, east - 22.5, west-southwest - 73, southwest - 84. Development in 1962 ahead of 1961 and slightly ahead of normal. Corn development later than normal. This situation, if it continues, coupled with general low overwintering populations, indicates that problems with first-generation borers will be light, with possible exception of early planted fields. (Ill. Ins. Rpt.). NORTH DAKOTA - Pupation not underway in Richland County as of May 18. (N. D. Ins. Sur.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Damaging young corn throughout Baldwin and Mobile Counties. (Seibels).

STALK BORER (Papaipema nebris) - KANSAS - Damaging corn in 9-acre field in Montgomery County, southeast area. Scattered throughout field. Some areas of field had 50 percent of corn plants infested. (Burkhardt).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - OKLAHOMA - Pupation of overwintering brood 72 percent in Payne County, north central area; by May 18. No moth emergence evident. Pupation also noted among those overwintered in sorghum in Greer County, southwest area. (Okla. Coop. Sur.).

CORN ROOT WEBWORM (Crambus caliginosellus) - VIRGINIA - Light, local, larval infestations in 2 fields of seedling corn in Pittsylvania County. (Dominick).

A SOD WEBWORM (Crambus sp.) - NEBRASKA - Several reports of activity occurring in Lincoln, Lancaster County. (Hill).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Less than 1 percent of wheat stems infested with full-grown larvae at crown or at first joint in Geary County, east central area. Stems beginning to break over. (Somsen). A few wheat fields in southeast area beginning to have broken stems, evidently caused by this species. (Peters).

AN AGROMYZID (Cerodontha dorsalis) - OREGON - Survey of 16 wheat fields in Gilliam and Sherman Counties indicates that populations are extremely low. Mines present in only 3 fields; less than 1 specimen per 25 sweeps. (Every).

THRIPS - MARYLAND - Beginning to cause streaking on more advanced field corn in Dorchester and Wicomico Counties. (U. Md., Ent. Dept.). GEORGIA - Light to moderate infestations on peanuts in Dooly, Sumter, Calhoun, Early, Mitchell, Colquitt, Irwin and Coffee Counties. (Johnson).

BROWN WHEAT MITE (Petrobia latens) - MONTANA - Infestations still reported prior to rains of May 12-13. (Roemhild). COLORADO - Moderate on wheat in Lincoln and Kit Carson Counties; counts 30-100 per foot of drill row. (Jenkins). TEXAS - Spotted infestations in Sherman County, high plains area, practically disappeared as wheat is maturing rapidly. (Goule).

A MITE - NEW MEXICO - Unspecified species extremely heavy on wheat near Ranchvale, Curry County; reported killing wheat. (N. M. Coop. Rpt.).

GARDEN SYMPHYLAN (Scutigerella immaculata) - IDAHO - Infesting cornfield in Canyon County, with one area of field completely killed out. (Bechtolt)

CLEAR-WINGED GRASSHOPPER (Camnula pellucida) - OREGON - Observed hatching in Harney County week of May 13. First and second instars extremely abundant on egg beds. (Jackson).

MORMON CRICKET (Anabrus simplex) - OREGON - Development to fifth instar, averaging 2-3 instars, observed in trace numbers in Gilliam and Morrow Counties by May 11. Weather has been generally unfavorable for cricket development. (Jackson).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - NORTH CAROLINA - First appeared in Wilkes County bait pails May 9. (Mount). MARYLAND - First moths of season appeared at Hancock, Washington County, May 15. (U. Md., Ent. Dept.). NEW YORK - No adults taken in bait pails yet in Hudson Valley, but pupation increasing and flights expected during first warm period. (N. Y. Wkly. Rpt., May 14). VERMONT - Pupation started. (MacCollom). OHIO - First adults emerged May 16, followed by very large numbers May 17-18. (Cutright). MICHIGAN - Pupating at Paw Paw and South Haven. (Hutson). INDIANA - First adult caught in bait trap May 9; rapid population increase expected. First entries in fruit will probably occur May 23 in Vincennes area, Knox County. (Redfern). MISSOURI - First adult of season trapped in Cape Girardeau County May 10; larvae expected soon. (Wkly. Rpt. Fr. Grs.). NEW MEXICO - First flight observed in Corrales area, Sandoval County, second week of May. (N. M. Coop. Rpt.). COLORADO - Adults numerous in Mesa County; 100 per five traps. Few adults appeared in Delta County; none in Montrose and Garfield Counties. (Bulla). UTAH - Adults collected in light trap and bait trap in Orem area, Utah County, May 10 and in blacklight trap May 11. (Davis, Knowlton).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - NEW YORK - Heavy flights started April 29 in Hudson Valley and continued through May 7, but light since. Moderate numbers of egg masses found, but not as many as expected. Moths noted

in Clinton County May 8. Controls effective in Orleans County; few eggs laid, no heavy deposition noted this year. (N. Y. Wkly. Rpt., May 14). CONNECTICUT - Egg masses found at Storrs, Tolland County. (Savos). PENNSYLVANIA - Hatched May 16 in Lycoming County on apple. (Gesell). MARYLAND - Larvae continue in Hancock area, Washington County; no egg masses found to May 15. (U. Md., Ent. Dept.). NORTH CAROLINA - First caught in bait pails in Wilkes County April 24. (Turnipseed). INDIANA - Larvae active in Vincennes area, Knox County; controls recommended. (Redfern, May 15). Eggs hatched in northern area. (Matthew). MICHIGAN - Eggs about 50 percent hatched at Niles, Sodus and Paw Paw. Eggs just beginning to hatch at Grand Rapids and Ionia. (Hutson). MISSOURI - First-brood activity over in most areas, with possible exception of northwestern area. Where adequate control measures not taken, considerable injury to foliage occurred. (Wkly. Rpt. Fr. Grs.). NEW MEXICO - No infestations found in orchards infested during summer of 1961 in Bernalillo and Sandoval Counties. (N. M. Coop. Rpt.).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - INDIANA - Collection of adults continues in bait traps in Vincennes area, Knox County. Peak emergence passed; twig damage expected latter part of week. (Redfern, May 15). Twig damage noted first time this season in Vigo County, May 17. (Matthew). NORTH CAROLINA - First caught in bait pails in Wilkes County April 28. (Turnipseed). MICHIGAN - Eggs hatching at Coloma. (Hutson).

FRUIT-TREE LEAF ROLLER (Archips argyrospilus) - NEW YORK - Eggs started hatching April 30 in Hudson Valley; completely hatched May 3. Feeding on terminals common in neglected orchards. (N. Y. Wkly. Rpt., May 14). NEW JERSEY - Apple orchards noted with scattered numbers; numerous in one orchard. (Ins.-Dis.-Weed Newsltr.). MISSOURI - Severe outbreak current throughout State. Larval activity nearly over in most areas and numerous pupae found in rolled leaves. Larvae attacking all kinds of foliage as well as fruit trees. Control extremely effective in most orchards. (Wkly. Rpt. Fr. Grs.). NEW MEXICO - Occasional larva found in apple orchards near Taos, Taos County. (N. M. Coop. Rpt.).

LEAF ROLLER MOTHS - NEW MEXICO - Unspecified species noted on apricot foliage near Espanola, Rio Arriba County. (N. M. Coop. Rpt.). INDIANA - Damage slight in apple orchards in south central counties. (Marshall, May 15). RHODE ISLAND - Unspecified species caused minor damage to new growth of apple and crabapple in Barrington, Bristol County. (Mathewson).

PEACH TWIG BORER (Anarsia lineatella) - COLORADO - Adults appearing in light traps in Mesa County; pupal stage numerous in Montrose County. (Bulla). UTAH - Caused moderate damage at Tooele and Erda, Tooele County; damaged untreated orchards in Utah County. (Knowlton).

PEACH TREE BORER (Sanninoidea exitiosa) - PENNSYLVANIA - Heavy in peach trees in Franklin County; many larvae in pupal cells although some still feeding. (Pepper).

CANKERWORMS - CONNECTICUT - This and various leaf-feeding caterpillars very common around State; damage quite noticeable in many orchards. (Savos). MISSOURI - Abundant in central and west central parts of State. (Wkly. Rpt. Fr. Grs.).

PLUM CURCULIO (Conotrachelus nenuphar) - MASSACHUSETTS - High temperatures brought adults into orchards in fair numbers. (Crop Pest Cont. Mess.). CONNECTICUT - First of season collected at Glastonbury, Hartford County, on plums. (Savos). DELAWARE - Eggs present in peach in Kent County. (MacCreary). INDIANA - Adults active in orchards in Vincennes area, Knox County. (Redfern, May 15). MICHIGAN - Adults readily found by jarring trees at Paw Paw, Sodus and Bangor. Some feeding and egg laying apparent on plums. (Hutson). MISSOURI - Most areas past peak of activity but adults still present in numbers in all sections; especially

noticeable in untreated or poorly treated orchards. (Wkly. Rpt. Fr. Grs.). OKLAHOMA - Damaged plum and peach crop in Mayes County area; this is new county record for pest. (Okla. Coop. Sur.). TEXAS - Moderate, local infestation in Falls County on plums and peaches, consisting of few adults and considerable larvae in fruit. (Hamman).

PLUM GOUGER (Anthonomus scutellaris) - OKLAHOMA - Infested plums and peaches in Mayes County area; noted on native plums in Altus area, Jackson County. (Okla. Coop. Sur.).

CLICK BEETLES - OREGON - Reported defoliating a young cherry orchard in Marion County severely enough to require controls. (Stephenson).

TARNISHED PLANT BUG (Lygus lineolaris) - NEW YORK - Abundant in all orchards checked in Oswego County May 4. Apparently hatched previous day. (N. Y. Wkly. Rpt.).

STINK BUGS - MISSOURI - Activity in southeastern orchards heavier than for some seasons past. (Wkly. Rpt. Fr. Grs.).

ROSY APPLE APHID (Anuraphis rosea) - COLORADO - Light on apples in Garfield County, 1-5 colonies per tree. (Bulla). INDIANA - Caused curling of leaves in some orchards in central area. (Matthew, May 15). MICHIGAN - Difficult to find at Niles, Sodus, Paw Paw and Grand Rapids. (Hutson). OHIO - Relatively scarce due to active predation. (Cutright). MARYLAND - Control on apples in Hancock area, Washington County, satisfactory in spring. (U. Md., Ent. Dept.). DELAWARE - Present on apple in Kent County. (MacCreary). CONNECTICUT - Easy to find but not serious in orchards in New Haven, New Haven County, and Plainfield, Windham County. (Savos).

APPLE APHID (Aphis pomi) - CONNECTICUT - Quite abundant in scattered spots at Storrs, Tolland County, in orchards. (Savos). COLORADO - Light on apples in Garfield County, 1-5 colonies per tree. (Bulla).

GREEN PEACH APHID (Myzus persicae) - COLORADO - Populations low on peach in Montrose County. (Bulla).

APHIDS - NEW YORK - Feeding on foliage noted on untreated orchards in Nassau County. (N. Y. Wkly. Rpt., May 14). MISSOURI - Most orchards have excellent control. (Wkly. Rpt. Fr. Grs.). NEW MEXICO - Populations rare to light in all pecan orchards except one, with heavy numbers in Carlsbad area, Eddy County, May 10-11. (Coppock).

PEAR PSYLLA (Psylla pyricola) - CONNECTICUT - Nymphs active in Niantic, New London County, and severe on some trees at Storrs, Tolland County. (Savos). NEW YORK - Newly hatched nymphs appeared in lake zone orchard in Niagara County May 11. (N. Y. Wkly. Rpt.).

THRIPS - MISSOURI - Unusually abundant in blossoms in orchards in southeastern area. (Wkly. Rpt. Fr. Grs.).

EUROPEAN APPLE SAWFLY (Hoplocampa testudinea) - NEW YORK - Noted in Hudson Valley May 7; some egg deposition. (N. Y. Wkly. Rpt., May 14). CONNECTICUT - Eggs hatched and larvae began tunnelling in Niantic, New London County. (Savos). MASSACHUSETTS - Adult found at Waltham, Middlesex County. Egg laying expected to increase with return of higher temperatures. (Crop Pest Cont. Mess.).

EUROPEAN RED MITE (Panonychus ulmi) - CONNECTICUT - Starting to build up in tree tops at Storrs, Tolland County. (Savos). NEW YORK - Hatching noted May 8 in Clinton County and May 4 in Orleans County. None hatched in Oswego County by May 11. (N. Y. Wkly. Rpt.). NEW JERSEY - Now in adult stage on apples in

New Brunswick area, Middlesex County; egg deposition expected. (Ins.-Dis.-Weed Newsltr.). PENNSYLVANIA - Populations building up on apple in Lycoming County. (Gesell). More numerous than usual in Adams County on apple. (Asquith). MARYLAND - Numbers increasing in some apple orchards in Hancock area, Washington County. (U. Md., Ent. Dept.). OHIO - Hatching complete May 10. (Cutright). MICHIGAN - Infestations, with discoloration apparent, on scattered Red Delicious apples at Coloma. (Hutson). INDIANA - Now in second generation; rapid buildup expected in south central counties. (Marshall, May 15). MISSOURI - Most sections of State report eggs abundant on apple foliage; considerable trouble expected if weather continues hot and dry. (Wkly. Rpt. Fr. Grs.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - INDIANA - Adults, eggs and newly hatched nymphs found on apple trees in Vigo County May 17. (Matthew).

A FRUIT-TREE MITE (Bryobia rubrioculus) - NEW MEXICO - Heavy populations damaged foliage in neglected and improperly treated apple and peach orchards in Taos and Rio Arriba Counties. (N. M. Coop. Rpt.).

MITES - NEW YORK - Feeding noted on untreated orchards in Nassau County. (N. Y. Wkly. Rpt., May 14). INDIANA - Averaged 3-7 per leaf in apple orchards in south central counties. (Marshall, May 15).

PECAN LEAF CASEBEARER (Acrobasis juglandis) - NEW MEXICO - Found in 2 nurseries in Carlsbad area, Eddy County; survey in city negative. Approximately 3 percent of terminals in nurseries were or had been infested. Pupation recent; egg laying expected shortly. (Coppock). TEXAS - Heavy, local infestation caused considerable damage to pecans in Brazos County; few moths beginning to emerge. (Randolph). ALABAMA - Present on pecans in Baldwin-Mobile County area; damage not noticeable. (Seibels).

PECAN NUT CASEBEARER (Acrobasis caryae) - ALABAMA - Damage not noticeable on pecans in Baldwin-Mobile County area. (Seibels). TEXAS - Treatment for first generation beginning in most areas of State; egg numbers range lighter to heavier than last year in various areas. (Texas Coop. Rpt.).

PECAN PHYLLOXERA (Phylloxera devastatrix) - OKLAHOMA - Light to heavy, scattered infestation occurring on pecan in Pauls Valley, Marietta and Durant areas. (Okla. Coop. Sur.).

A CURCULIONID (Conotrachelus sp.) - TEXAS - Larvae found in abundance in Hamilton County boring in pecan shoots and twigs; damage economic. (Lawrence)

BLACK PECAN APHID (Melanocallis caryaefoliae) - ALABAMA - Heavy populations caused moderate damage to pecans in Baldwin-Mobile County area. (Seibels). TEXAS - Light, local infestation noted on few trees in Denton County. (Turney).

WALNUT APHID (Chromaphis juglandicola) - UTAH - Present in low numbers at Tooele, Tooele County. (Knowlton).

Citrus Insect Situation in Florida - Mid-May - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 40 percent of groves (norm 55 percent); 21 percent economic (norm 31 percent). Population at lowest level in 10 years. Increasing trend expected in early June. Time and rapidity of increase will depend largely on effectiveness of spring spray applications. Highest districts are upper east coast, Bartow and Indian River. CITRUS RED MITE (Panonychus citri) infested 43 percent of groves (norm 67 percent); 19 percent economic (norm 44 percent). Strong increasing trend began which will take population into high range in June in most districts. Highest districts are upper east coast, Brooksville, west coast and Orlando. TEXAS CITRUS MITE (Eutetranychus banksi) infested 49 percent of groves (norm 28 percent); 19 percent economic (norm 14 percent).

Population will increase rapidly, reaching summer peak about mid-June. Infestations will be more numerous and heavier than in prior years. Highest districts are upper east coast, ridge, Bartow and Brooksville. PURPLE SCALE (Lepidosaphes beckii) infested 82 percent of groves (norm 83 percent); 16 percent economic (norm 21 percent). Situation similar to that of past 3 years. Very few infestations will be severe. Highest district is ridge. FLORIDA RED SCALE (Chrysomphalus aonidum) infested 27 percent of groves (norm 56 percent); 3 percent economic (norm 10 percent). Population far below average; parasites expected to keep infestations light in all districts. BLACK SCALE (Saissetia oleae) infested 31 percent of groves (norm 23 percent); 11 percent economic (norm 9 percent). Summer brood will increase rapidly, reaching peak on twigs latter part of June to above normal level. Presently 70 percent of scales are in settled-crawler stage. Highest districts are Indian River and ridge. (Simanton, Thompson, Johnson, Brooks (Citrus Exp. Sta., Lake Alfred)).

Coccids on Citrus in Florida - Lepidosaphes beckii, Parlatoria pergandii and Unaspis citri infestations light at Winter Park, Orange County, May 9; the latter present at Orlando, Orange County, May 8. (Fla. Coop. Sur.)

SPIREA APHID (Aphis spiraeicola) - FLORIDA - Lightly infested 5,000 orange trees at Plymouth, Orange County. (Pott, May 8).

A LEAFHOPPER (Homalodisca coagulata) - TEXAS - Heavy, widespread infestations, representing all stages, present on citrus trees in Cameron County; 20 per small tree noted. (Texas Coop. Rpt., Stephens).

BLACK-HEADED FIREWORM (Rhopobota naevana) - WASHINGTON - Now hatching on cranberries in Pacific and Grays Harbor Counties. (Kruiswyk). OREGON - Eggs hatched and young larvae observed webbing terminals of cranberry in Brandon area, May 10. Some controls being applied. (Goeden).

A WEEVIL (Ampelogypter ater) - VIRGINIA - Infested grapevines locally in Halifax County. (Amos, Hall, May 9).

GRAPE ROOT BORER (Vitacea polistiformis) - MARYLAND - Larvae caused some stunting of grapevines at Kensington, Montgomery County. (U. Md., Ent. Dept.).

TRUCK CROP INSECTS

BLISTER BEETLES - TEXAS - Moderate, widespread infestations appearing in vegetable gardens in Refugio County. (Bredthauer).

POTATO APHID (Macrosiphum euphorbiae) - NEW JERSEY - Appearing on potatoes. (Ins.-Dis.-Weed Newsltr., May 15). MARYLAND - Light to moderate on potatoes in Caroline, Dorchester and Montgomery Counties. (U. Md., Ent. Dept.). DELAWARE - Present on potatoes and beans in Sussex County; fairly common on some potatoes in Kent County. (Burbutis).

GREEN PEACH APHID (Myzus persicae) - DELAWARE - Slight increase on peppers in seedbeds in Sussex County; present on potatoes in Kent County. (Burbutis).

TARNISHED PLANT BUG (Lygus lineolaris) - DELAWARE - Adults rather common on peppers in seedbed in Sussex County. (Burbutis).

POTATO PSYLLID (Paratrioza cockerelli) - NEBRASKA - Ranged 0-4 adults per 100 sweeps in Lycium halimifolium in Scotts Bluff area. (Hagen).

POTATO FLEA BEETLE (Epitrix cucumeris) - ALABAMA - Numerous on garden crops in Baldwin-Mobile County area. (Seibels). MARYLAND - Infested potatoes and tomatoes in Dorchester, Talbot and Wicomico Counties. (U. Md., Ent. Dept.). DELAWARE - Present on beans in Sussex County; numerous to abundant on some potatoes in Kent and Sussex Counties. (Burbutis).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - Infested potatoes and tomatoes in Dorchester, Talbot and Wicomico Counties. (U. Md., Ent. Dept.).

FLEA BEETLES - NEW YORK - Active May 10 in Erie County. (N. Y. Wkly. Rpt.). NEW JERSEY - Damage becoming evident on potatoes. (Ins.-Dis.-Weed Newsltr., May 15). PENNSYLVANIA - Abundant in all potato and tomato fields in York County, even where systemics used. (Pepper). MARYLAND - Phyllotreta spp. common on cabbage and other cole crops in home gardens on Eastern Shore. (U. Md., Ent. Dept.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - OKLAHOMA - Heavy populations causing considerable damage to potatoes in Pauls Valley area; up to 10 larvae and adults per plant. Also reported in Choctaw County. (Okla. Coop. Sur.). ALABAMA - Moderate to heavy on home plantings in Chilton County. (Helms). MARYLAND - Egg laying continuing on potatoes in southern and central sections. (U. Md., Ent. Dept.). DELAWARE - First adults and eggs of season abundant on potatoes and tomatoes in one area of Sussex County. (Burbutis).

FALSE POTATO BEETLE (Leptinotarsa juncta) - ALABAMA - Extremely heavy on home plantings of potatoes in Mobile County. (Seibels).

THREE-LINED POTATO BEETLE (Lema trilineata) - DELAWARE - Adults common on potatoes locally in Sussex County. (Burbutis).

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Egg masses common on peppers (4 per 100 plants) in seedbed in Sussex County; common on potatoes in Kent and on weeds in Sussex County. (Burbutis).

CUCUMBER BEETLES - ALABAMA - Diabrotica undecimpunctata howardi moderate on squash in Chilton County. (Helms). MARYLAND - Acalymma vittata adults 1-3 per plant on large planting of cucumbers at Hurlock, Dorchester County. (U. Md., Ent. Dept.).

SQUASH BUG (Anasa tristis) - TEXAS - Light to moderate, widespread infestations on squash in Guadalupe County. (Tex. Coop. Rpt., Massey).

MELONWORM (Diaphania hyalinata) - TEXAS - Damage to watermelons widespread in Brooks County; causing concern. (Murphy).

PEA APHID (Macrosiphum pisi) - PENNSYLVANIA - Fairly heavy on peas; alates, aptera and nymphs present. (Pepper). DELAWARE - Considerably increased in several large fields of peas in eastern Sussex County; counts in some fields averaged over 40 per sweep. (Burbutis). ALABAMA - Heavy on peas and beans in Baldwin-Mobile County area. (Seibels).

MEXICAN BEAN BEETLE (Epilachna varivestis) - GEORGIA - Heavy on beans in Coffee County. (Johnson). ALABAMA - Moderate, many larvae present, on peas and beans in Baldwin-Mobile County area (Seibels); heavy in Escambia and Monroe Counties (Lemons); and moderate in Chilton County (Helms). MARYLAND - First adults of season on beans at Cambridge, Dorchester County. (U. Md., Ent. Dept.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - GEORGIA - Heavy on beans in Spalding County. (Dupree, May 8). MARYLAND - Adults continue abundant on young beans in central and southern sections. (U. Md., Ent. Dept.). DELAWARE - Adults common to numerous on beans throughout Sussex County, with a few fields showing rather heavy feeding. (Burbutis). VIRGINIA - Adults moderately severe on seedling beans in several home gardens in Pittsylvania County. (Dominick, May 11).

IMPORTED CABBAGEWORM (Pieris rapae) - GEORGIA - Moderate on cabbage in Spalding County. (Dupree, May 7). NORTH DAKOTA - First adults observed in Richland County. (N. D. Ins. Sur.). DELAWARE - All instars common on cabbage in Sussex County. (Burbutis).

CABBAGE MAGGOT (Hylemya brassicae) - VERMONT - Injury observed on cole crops recently set out. (MacCollom).

HARLEQUIN BUG (Murgantia histrionica) - OKLAHOMA - Reported on garden plants in Stephens County. (Okla. Coop. Sur.). ALABAMA - Light on turnips in Baldwin-Mobile County area. (Seibels).

CABBAGE APHID (Brevicoryne brassicae) - DELAWARE - Abundant on few plants locally in Sussex County. (Burbutis). FLORIDA - Infestations moderate to severe on collards at Mascotte, Lake County, May 11. (Henderson).

YELLOW-MARGINED LEAF BEETLE (Microtheca ochroloma) - ALABAMA - Heavy on turnips in Mobile-Baldwin County area. (Seibels).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - FLORIDA - Collected on sweetpotato at White Springs, Hamilton County, April 26; at Goulds, Dade County, April 13; at Miami, Dade County, April 19; and at Jennings, Hamilton County, April 25. Det. by C. H. Lauffer. (Fla. Coop. Sur.).

TORTOISE BEETLES - ALABAMA - Metritona bicolor, Agroiconota bivittata and Deloyala guttata moderate on sweetpotatoes in Baldwin-Mobile County area. (Seibels).

ONION MAGGOT (Hylemya antiqua) - IDAHO - First observed in Parma area, Canyon County, April 25. By May 7, many adults noted in small planting of onions and closely related plant species at Branch Experiment Station. Reported numerous in onion bulb field in the area. (Scott).

LESSER BULB FLY (Eumeris tuberculatus) - IDAHO - Numerous in onion bulb field near Parma, Canyon County. (Scott).

ASPARAGUS BEETLES (Crioceris spp.) - RHODE ISLAND - First C. asparagi adults of season collected at East Greenwich, Kent County, May 17. (Mathewson). VERMONT - Adults of C. asparagi prevalent. (MacCollom). VIRGINIA - C. asparagi light on asparagus locally near Midlothian, Chesterfield County, and C. duodecimpunctata light on asparagus locally in Montgomery County. (Tarpley). WISCONSIN - C. asparagi and C. duodecimpunctata reported very common on asparagus in Dane County. Presently laying eggs. (Wis. Ins. Sur.).

BEET LEAFHOPPER (Circulifer tenellus) - IDAHO - Movement into Gooding, Jerome and Lincoln Counties expected to be light this year; movement into western Twin Falls County may be higher than in 1961, although controls should materially reduce potential movement. If normal conditions occur, peak of movement will be last week of June. Tests on adults taken in spring surveys indicate adults in Perrine-Jerome area were 7.5 percent viruliferous; 5 percent in western Sailor Creek area and 21.9 percent in central Sailor Creek area. Viruliferous adults about normal in Mountain Home area. (Evans).

STRIPED FLEA BEETLE (Phyllotreta striolata) - WYOMING - Larvae caused light damage to beet seedlings in Goshen County in scattered areas. Counts under 1 per square foot, few adults found. (Fullerton).

A HOP NEMATODE (Heterodera humuli) - WASHINGTON - Recovered from soil at Orting and Roy, Pierce County, and intercepted on imported hop cuttings consigned to Roy. Det. by G. S. Cobb. (Brown, Nakahara).

STRAWBERRY APHID (Pentatrichopus fragaefolii) - WASHINGTON - Infestations light; alate nymphs appeared May 10 on strawberry in Vancouver area, Clark County. (Shanks).

FOXGLOVE APHID (Myzus solani) - WASHINGTON - Becoming numerous on strawberries near Vancouver, Clark County. (Shanks).

SPITTLEBUGS - INDIANA - Unspecified species very much evident, with some damage to strawberries in south central counties. (Marshall, May 15).

MEADOW SPITTLEBUG (Philaenus spumarius) - WASHINGTON - Heavy infestations on untreated strawberries near Vancouver, Clark County. (Shanks).

STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) - MARYLAND - Larvae caused light injury to new strawberry plantings at Princess Anne, Somerset County. (U. Md., Ent. Dept.).

STRAWBERRY WEEVIL (Anthonomus signatus) - MARYLAND - Larvae noted in cut strawberry buds at Glendale, Prince Georges County. (U. Md., Ent. Dept.).

A SPIDER MITE (Tetranychus sp.) - MARYLAND - Building up to economic levels on strawberries at Glendale, Prince Georges County. (U. Md., Ent. Dept.).

TOBACCO INSECTS

WIREWORMS (Conoderus spp.) - NORTH CAROLINA - C. vespertinus heavily damaging tobacco in Bertie County; infestation 40-90 percent. (Rabb). C. vespertinus primarily responsible for injury to 3 tobacco fields in Bladen County, 3 in Duplin County, 2 in Jones County and 1 in Lenoir County. Also comprised part of mixed population in 2 Onslow County fields. Some of above-mentioned fields reset; all reset at least once and some 3 times. Original infestation in many fields estimated at 20-30 percent, some up to 90 percent. C. falli infesting 2 tobacco plantings in Pender County and 2 in Onslow County; infestations 20-50 percent. C. lividus causing considerable damage to a tobacco planting in Jones County; infestation 80-90 percent and this species comprised approximately 40 percent of wireworms present. C. lividus also present in Onslow, Duplin and Lenoir Counties. Pupae of undetermined species collected in Jones and Onslow Counties. Det. by R. L. Rabb. (Mount). SOUTH CAROLINA - Damage to tobacco greater than at any time in past years; C. vespertinus and C. falli involved in problem. Both species present in Horry County; many growers requesting control information in Dillon County. Controls generally good in Williamsburg County, although several partial failures have appeared. C. vespertinus infestation in Marion County worst ever observed, resulting in large number of growers resetting fields. (Nettles et al.).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - GEORGIA - Light on tobacco in Mitchell, Colquitt, Irwin, Coffee, Bacon and Jeff Davis Counties. (Johnson).

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Moderate to heavy on tobacco in Mitchell, Colquitt, Irwin, Coffee, Bacon and Jeff Davis Counties. (Johnson).

A HORNWORM - GEORGIA - Egg deposition by an unspecified species moderate to heavy on tobacco in Colquitt, Irwin, Coffee, Bacon and Jeff Davis Counties. (Johnson).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Weather conditions continue unfavorable for activity in McLennan and Falls Counties. Adults averaged 9 and ranged 0-250 per acre. This compares with 2 per acre during corresponding week of 1961; 2 weevils collected on flight screens. (Cowan, Davis). Appearing in field margins adjacent to hibernation quarters in southern area; infestations light. (Deer). LOUISIANA - Only one adult found in field in Tallulah area. Emergence remains light in hibernation cages; few taken during May on trap plantings of fruiting cotton in Madison Parish. Activity abnormally low for time of year; will remain so until rains occur. (Smith et al.). ALABAMA - Overwintering weevils observed blasting terminals of seedling cotton in Lowndes County. (Buttram).

PALE-STRIPED FLEA BEETLE (Systema blanda) - ARKANSAS - Controls applied to one field in Monroe County; apparently migrated into cotton from nearby cocklebur. (Ark. Ins. Sur.).

WIREWORMS - SOUTH CAROLINA - Some damage to cotton seedlings by unspecified species present in Clarendon County. (Nettles et al.).

BOLLWORMS (Heliothis spp., et al.) - TEXAS - Total of 2 eggs and 4 larvae observed in 3 fields in McLennan and Falls Counties. (Cowan, Davis). Some light infestations in coastal bend and southern areas; most cotton in other areas too young to be damaged. (Texas Coop. Rpt.). LOUISIANA - Presently not a problem in Tallulah area; no cotton fruiting. (Smith et al.). GEORGIA - Of 40 cotton fields examined in southern area, 15 infested with eggs and larvae; eggs ranged 5-21 and averaged 6 per 100 terminals; larvae ranged 1-4 and averaged 3 per 100 terminals. (Johnson).

PINK BOLLWORM (Pectinophora gossypiella) - FLORIDA - Collected on wild cotton at Ft. Myers, Lee County, April 23. Det. by C. H. Lauffer. (Brown).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Medium populations damaging cotton foliage in some portions of central and southwestern areas. (Ariz. Coop. Sur.).

GRANULATE CUTWORM (Feltia subterranea) - GEORGIA - Probably this species, heavy on cotton in Bacon County. (Morgan, Johnson).

COTTON APHID (Aphis gossypii) - ALABAMA - Infestations heavy and requiring controls in Escambia County. (Buttram). TEXAS - Light in McLennan and Falls Counties. (Cowan, Davis). Generally light to moderate, except for some areas in coastal bend and southern sections where few heavy infestations have developed. Parasitism rather high in latter sections. (Texas Coop. Rpt.).

COTTON FLEAHOPPER (Psallus seriatus) - ARIZONA - Counts of 10 per 100 sweeps present in some central area cotton. (Ariz. Coop. Sur.). TEXAS - Adults found in few early planted fields in McLennan and Falls Counties and nymphs found in few fields before application of controls. (Cowan, Davis).

A BLACK FLEAHOPPER (Spanogonicus albofasciatus) - ARIZONA - Light to medium on cotton in central area; populations considerably lower than at same time in 1961. Combination of fleahoppers and lygus bugs causing 50 percent square loss in many fields which are squaring; maximum number of squares about 5 per plant. (Ariz. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Light adult populations present in many central area cotton fields; adult migration several weeks earlier than normal. (Ariz. Coop. Sur.).

THRIPS - ARIZONA - Populations declining in most areas but continue damaging foliage in some south central area cotton. (Ariz. Coop. Sur.). NEW MEXICO - Causing moderate to heavy damage in many fields in Hatch area, Dona Ana County. Controls being applied; cotton in 4-6 leaf stage. Light to moderate populations in scattered fields in Mesilla Valley. (N. M. Coop. Rpt.). TEXAS - General infestations occurred over McLennan and Falls County area; migration continuing. Infestations in untreated fields were as follows: Heavy in 5, medium in 9, light in 14 fields. High percentage of fields now treated, but continued protection will be needed. (Cowan, Davis). Infestations very spotted over State; generally lighter in southern portion than in other areas. (Texas Coop. Rpt.). LOUISIANA - Generally light on older cotton in Tallulah area, but nymphs appearing; treatment becoming general. Infestations expected to increase rapidly during next 7 days in late-planted cotton unless rainfall occurs. (Smith et al.). ARKANSAS - Light infestations found in most cotton fields. Banded species predominate. Numbers few due to warm weather. (Ark. Ins. Sur.). GEORGIA - Light to moderate on cotton in Houston, Dooly, Sumter, Calhoun, Early, Mitchell, Jeff Davis, Treutlen, Johnson,

Colquitt, Irwin, Coffee, Bacon and Washington Counties; heavy in Oconee and Morgan Counties. (Johnson). SOUTH CAROLINA - First found in Chesterfield County cotton on May 10. (Nettles et al.).

SPIDER MITES - TEXAS - Several species range generally light to moderate; few heavy infestations have appeared in southern area. (Texas Coop. Rpt.).

Weather of the Week Ending May 21 (cont'd from page 508)

two farms were torn up by a tornado and water was reported to have been pulled from a canal by a twister near North Platte, Nebraska. East of Dodge City, Kansas, a tornado ripped a patch of destruction 1 mile wide and 15 miles long.

In Texas, moisture continues critically short in most sections, with little or no rainfall since May 1. Many stations reported that the first 3 weeks of May have been the driest such period on record.

Drought continues to plague nonirrigated areas of Florida as showers were few and far between. Little precipitation was observed in much of the remainder of the southeast and westward to Louisiana where the situation parallels that of Texas. Most of the State of Indiana has had no rain since May 11. (Summary Supplied by U. S. Weather Bureau).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

AN ARMORED SCALE (Aspidiotus diffinis) - FLORIDA - Collected on Mimosa sp. at Williston, Levy County, by A. E. Graham on December 6, 1961, for a new State record. Det. by H. Morrison. (Fla. Coop. Sur.).

A CRESCENT-GALL POPLAR APHID (Cornaphis populi) - UTAH - Collected at Garden City, Rich County, on August 16, 1960, by C. F. Smith and G. F. Knowlton. Det. by G. F. Knowlton. (Knowlton). According to available records, this species is new to Utah.

PINE TUSSOCK MOTH (Dasychira plagiata) - WISCONSIN - Cool temperatures in area of Bayfield County, where this species is a prime pest, have caused defoliation to diminish somewhat. Warmer temperatures will accentuate amount of defoliation and present better picture of extent of damage. (Wis. Ins. Sur.).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - ARKANSAS - First-generation larvae pupating in southern part of State; approximately 50-75 percent in pupal stage. Adult emergence expected by May 25. (Ark. Ins. Sur.).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - WASHINGTON - Large numbers found on ornamentals in residential area south of Bellingham, Whatcom County. (Eide). INDIANA - In final instar in Fulton County; first pupa of season found in county on May 17. (Schuder).

A LEAF ROLLER (Tortrix pallorana) - INDIANA - Damaging terminals of Scotch pine in Pulaski County; first pupa found May 17. (Schuder).

PALES WEEVIL (Hylobius pales) - PENNSYLVANIA - Severely debarked one-year-old and seedling Scotch pines planted this spring in cut area in Juniata County; as many as 9 weevils present at base of year-old plants. (Udine). NEW YORK - Emergence indicated by collection of adult on Long Island. (N. Y. Wkly. Rpt., May 14).

WHITE-PINE WEEVIL (Pissodes strobi) - PENNSYLVANIA - Only light feeding noted in Perry, Cumberland and Fulton Counties, in areas where damage was moderate to severe during 1961. (Pa. For. Pest Rpt., May). NEW YORK - Noted in Chemung County on Douglas-fir. (N. Y. Wkly. Rpt., May 14).

PINE BARK APHID (Pineus strobi) - PENNSYLVANIA - Infestations range light to heavy on white pine over State; crawlers present throughout south central counties. (Pa. For. Pest Rpt., May).

PINE SPITTLEBUG (Aphrophora parallela) - PENNSYLVANIA - Appearing on white pine, Scotch pine and larch in south central counties. Moderate infestation exists at Sideling Hill, Fulton County; spittle masses present on nearly every twig of numerous white pine reproduction. (Pa. For. Pest Rpt., May). MARYLAND - Spittle masses common on Virginia pines in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - PENNSYLVANIA - Hatched and settled on Scotch pine in Lycoming County, May 10. (Gesell). Heavy in plantings of white, red, Scotch and mugho pines in Westmoreland, Luzerne and Schuylkill Counties. (Pa. For. Pest Rpt., May). NEW YORK - Very severe and caused considerable damage to mugho and Scotch pines throughout State. (N. Y. Wkly. Rpt., May 14). RHODE ISLAND - Has not yet hatched. (Mathewson).

A RED-PINE SCALE (Matsucoccus resinosae) - NEW YORK - Adult female and group of well-developed nymphs found in Westchester County May 10. (N. Y. Wkly. Rpt.).

EUROPEAN PINE SAWFLY (Neodiprion sertifer) - PENNSYLVANIA - Infestation of Pinus sp. noted in Mercer County, May 10. (Simons). INDIANA - Fourth instar present in Perry County. This is a new county record. (Schuder).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - PENNSYLVANIA - Egg laying noted May 10 on Scotch pine in Snyder County. (Gesell). NORTH CAROLINA - Seriously defoliating approximately 50 acres of loblolly pine in Craven County. (Fox, N. C. For. Serv.).

PINE SAWFLIES (Neodiprion spp.) - MARYLAND - Larvae of N. pratti pratti generally infesting Virginia pines in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.). VIRGINIA - Neodiprion spp. infesting Pinus taeda in nursery near Richmond (Freund) and moderate on pine in Montpelier-Beaverdam section of Hanover County (Sanders).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - First generation now present throughout southeastern part of State. Numbers have not yet reached epidemic proportions, but a recurrence of the 1961 infestation is very possible. (Dry, Cancienne).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - NEW YORK - Moderate to heavy, locally in Suffolk County. (N. Y. Wkly. Rpt., May 14). PENNSYLVANIA - Only few tents noted on native cherry in western part of State; heaviest in 2-3 locations. (Yackley). Rather light in Snyder County (Negley, Balsbaugh), and only few noted in Juniata, Blair and Indiana Counties (Udine). Populations very light throughout southern part of State. (Pa. For. Pest Rpt., May).

TENT CATERPILLARS (Malacosoma spp.) - COLORADO - Defoliating cottonwood trees in Otero County. (Schweissing). NEW YORK - Second and third instars feeding on native cherry in all 5 boroughs of New York City. (Schiff).

GREEN FRUITWORM (Lithophane antennata) - DELAWARE - Larvae feeding on apple and elms in Sussex County. (Kelsey).

SPRING CANKERWORM (Paleacrita vernata) - WISCONSIN - First to third instars feeding heavily on elms in Waukesha County. (Wis. Ins. Sur.). ILLINOIS - Abundant in west and west-southwest districts; beginning to defoliate hackberry and elms; larvae ranged 2-6 per leaf. (Ill. Ins. Rpt.). MISSOURI - Causing severe defoliation of elms in north central area. (Munson, Thomas, Wood). NEW YORK - First and second instars feeding in Forest Park, Queens; treatment applied May 15-16. (Schiff).

CANKERWORMS - CONNECTICUT - Various species feeding on foliage of large number of trees; injury quite noticeable. (Savos). NEW JERSEY - Unspecified species active on shade trees. (Ins.-Dis.-Weed Newsltr., May 15).

WHITE-MARKED TUSsock MOTH (Hemerocampa leucostigma) - ALABAMA - Larvae infesting willows in Mobile County. (Seibels).

LARCH CASEBEARER (Coleophora laricella) - PENNSYLVANIA - Lightly defoliating larch in Perry, Cumberland, Franklin, Fulton and Somerset Counties. (Pa. For. Pest Rpt., May).

LEAF ROLLERS - UTAH - Undetermined species damaging foliage of native oaks in Farmington-Kaysville area, Davis County. (Knowlton). COLORADO - An undetermined black-headed species very numerous on apple, crabapple, hawthorn, rose and other ornamental shrubs in Denver. (Gundell).

A CLEARWING MOTH - UTAH - Larvae of an undetermined species killing ash trees at Springville, Utah County. Cast pupal skins in tunnels indicate adults apparently have been emerging in numbers. (Knowlton).

POPLAR TENT MAKER (Ichthyura inclusa) - TEXAS - Larvae damaged cottonwood trees in Guadalupe County. (Massey).

ELM LEAF BEETLE (Galerucella xanthomelaena) - IDAHO - First observed in Parma area, Canyon County, April 26; little feeding activity to May 18. (Scott). UTAH - Few adults noted in Salt Lake County. (Knowlton). COLORADO - Eggs

hatching on Chinese elms and other ornamentals in Mesa County. (Bulla). TEXAS - Severe outbreak which occurred in fall of 1961 in Motley County being followed by new spring generation which is damaging elms. (Pallmeyer). OKLAHOMA - Larvae causing considerable damage to elms in Stillwater area, Payne County. First egg laying of season reported from Kiowa and Okmulgee Counties; activity also reported in Kingfisher, Blaine, Murray, Delaware and Noble Counties. (Okla. Coop. Sur.). ARKANSAS - Hatching of first generation eggs nearly complete; larvae approximately one-half to three-fourths grown. (Ark. Ins. Sur.). ILLINOIS - Larvae feeding on leaves of Chinese elms in Champaign County, May 17. (English).

IMPORTED WILLOW LEAF BEETLE (Plagiodera versicolora) - DELAWARE - Adults common on willows in Sussex and western portion of Kent Counties. (Burbutis).

MAPLE PETIOLE BORER (Caulocampus acericaulis) - INDIANA - Causing defoliation of hard maples in West Lafayette, Tippecanoe County. (Schuder).

POPLAR-AND-WILLOW BORER (Sternochetus lapathi) - IDAHO - Larvae feeding on wood of basal stems of willow along Boise River, near Caldwell, Canyon County. (Furniss).

PAINTED MAPLE APHID (Drepanaphis acerifoliae) - DELAWARE - Common on maple in area of Sussex County. (MacCreary).

A LEAF-CURL ASH APHID (Prociphilus fraxinifolii) - NEVADA - Medium populations present on ash trees in Reno-Sparks area, Washoe County. (Bechtel).

EUROPEAN ELM SCALE (Gossyparia spuria) - IDAHO - Infestations present on treated and untreated elms in Lewiston, Nez Perce County. (Kambitch, Portman).

TERRAPIN SCALE (Lecanium nigrofasciatum) - SOUTH CAROLINA - Heavy infestation present on oaks in Chesterfield County. (Nettles et al.).

A PIT SCALE (Asterolecanium minus) - PENNSYLVANIA - Severe and general infestation in Fulton and Bedford Counties. Primarily infesting chestnut oak on poorer sites and causing much dieback. (Pa. For. Pest Rpt., May).

GALL INSECTS - NORTH CAROLINA - Undetermined species infesting maple in Caldwell County. (Mount). PENNSYLVANIA - Several species forming galls on oak in Adams, Franklin and York Counties. (Pepper). INDIANA - Galls of Andricus palustris common on many pin oaks over State. (Schuder). UTAH - Galls of unspecified species serious on twigs of native oaks in many parts of State. (Knowlton).

BIRCH LEAF MINER (Fenusa pusilla) - MASSACHUSETTS - Adults active; eggs will soon hatch in earliest areas. (Crop Pest Cont. Mess.). CONNECTICUT - Now active and homeowners should apply controls. (Savos). NEW YORK - Noted in Chemung County. Adults active in State but cool weather slowed development of eggs and mines. Mines started in Westchester County May 10; controls recommended. (N. Y. Wkly. Rpt., May 14). PENNSYLVANIA - Laying eggs on birch in Blair County, May 15; averaged one adult per leaf. (Udine). DELAWARE - Eggs hatched May 15 in Newark area, New Castle County. (Connell).

MAPLE BLADDER-GALL MITE (Vasates quadripedes) - NEW YORK - Noted in Chemung County. (N. Y. Wkly. Rpt., May 14). PENNSYLVANIA - Galls began forming on silver maple in Dauphin County the first week of May, and in Somerset County on same host the following week. (Pa. For. Pest Rpt., May). MARYLAND - Galls present on maples in Carroll, Prince Georges and Wicomico Counties. (U. Md., Ent. Dept.). INDIANA - Complaints numerous from homeowners in Indianapolis area, Marion County. (Schuder).

BAGWORM (Thyridopteryx ephemeraeformis) - PENNSYLVANIA - Many present in Westmoreland County; problem can be expected this year. (Yackley). ARKANSAS - Eggs hatching. (Ark. Ins. Sur.). OKLAHOMA - Present on shrubs in Cherokee County area. (Okla. Coop. Sur.). KANSAS - Most eggs hatched in Chautauqua County, but still in bags May 9. (Gates).

ARBORVITAE LEAF MINER (Argyresthia thuiella) - MARYLAND - Heavy numbers of pupae noted in arborvitae at Rockville, Montgomery County. (U. Md., Ent. Dept.).

A CYPRESS MOTH (Argyresthia sp.) - WASHINGTON - Attacking tips of ornamental cedar near Vancouver, Clark County; cocoons present May 7. (Shanks).

DOGWOOD BORER (Thamnospectia scitula) - PENNSYLVANIA - Full grown larvae in dogwood in Franklin County, May 15. (Pepper).

STALK BORER (Papaipema nebris) - NEW YORK - Injured chrysanthemums in outside beds latter part of April in Nassau County. (N. Y. Wkly. Rpt.).

A SEAGRAPE BORER (Hexeris enhydris) - FLORIDA - Moderate on 1,800 Coccoloba uvifera at Merritt Island, Brevard County, May 7. (Fla. Coop. Sur.).

A NOCTUID (Xenociris wilsoni) - TEXAS - Heavy, local population attacking jonquil foliage in Brazos County. (Alex).

LOCUST LEAF MINER (Xenochalepus dorsalis) - PENNSYLVANIA - Adults observed in Westmoreland County week of April 30. (Yackley).

ARBORVITAE WEEVIL (Phyllobius intrusus) - NEW YORK - Pupa and several larvae collected on Long Island. (N. Y. Wkly. Rpt., May 14).

A FLEA BEETLE (Blepharida rhois) - MISSOURI - Feeding on smoketrees in east central area. (Munson, Thomas, Wood).

SPIREA APHID (Aphis spiraeicola) - FLORIDA - Moderate on Photinia deflexa at Ft. Lauderdale, Broward County, April 27. (Fla. Coop. Sur.).

APHIDS - NEVADA - Rhopalosiphum berberidis heavy on barberry in Reno, Washoe County. (Bechtel). UTAH - Anuraphis viburnicola causing some damage at Tooele-Grantsville area, Tooele County, and causing moderate leaf curling from Pleasant Grove to Spanish Fork in Utah County. Damage to May 18 common but below usual severity in various central area communities. (Knowlton).

AZALEA LACE BUG (Stephanitis pyrioides) - MARYLAND - Nymphs infesting azaleas in Prince Georges County and at Baltimore. (U. Md., Ent. Dept.).

BLACK SCALE (Saissetia oleae) - RHODE ISLAND - Heavy on Kalanchoe sp. and Vinca sp. in greenhouse in Peace Dale, Washington County. (Mathewson).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - IDAHO - Infesting crabapple trees in Cottonwood, Idaho County. (Portman).

AZALEA BARK SCALE (Eriococcus azaleae) - PENNSYLVANIA - Heavily infested home plantings of Rhododendron sp. in York County. (Pepper).

A MINING SCALE (Pseudaonidia clavigera) - FLORIDA - Infested Rhododendron sp. (May 3), Macadamia sp. (May 4) and Camellia japonica (May 14) at St. Petersburg, Pinellas County. (Fla. Coop. Sur.).

Coccids in Florida - Aspidiotus ancyclus and A. osborni infested Quercus sp. at St. Petersburg, Pinellas County (Apr. 9). Asterolecanium epidendri severely infested 50 Anthurium plants at Tampa, Hillsborough County (Jan. 2), and A. pustulans was moderate on Grevillea sp. at Eagle Lake, Polk County (May 4) and ranged moderate to severe on Bursera simaruba at Davie, Broward County (Jan. 16). Both species of Asterolecanium determined by L. M. Russell. Fiorinia theae severely infested Camellia sp. and Ilex sp. at Tampa (May 8) and was moderate on Camellia sp. at Lake Jem, Lake County (May 9). Phenacaspis cockerelli was moderate on Strelitzia sp. at Merritt Island, Brevard County (May 7) and light on unknown species of bay at Arcadia, De Soto County (May 8). Toumeyella liriodendri moderately infested Magnolia soulangeana at Longwood, Lake County (May 7). (Fla. Coop. Sur.).

A COCCID (Aspidiotus sp.) - WASHINGTON - Severe on ornamental Colorado blue spruce trees in Ellensburg, Kittitas County. (Brannon, Scott).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - Badly discolored some rose gardens in Pleasant Grove-Provo area, Utah County, and in Salt Lake City area. (Knowlton).

BOXWOOD PSYLLID (Psylla buxi) - VIRGINIA - Heavy on boxwood at Virginia Polytechnic Institute campus, Blacksburg, Montgomery County. (Tarpley, Pienkowski).

NATIVE HOLLY LEAF MINER (Phytomyza ilicicola) - RHODE ISLAND - Mines still contain pupae. (Mathewson). NEW YORK - Emerged from American holly in various locations in western Suffolk County. (N. Y. Wkly. Rpt., May 14). NEW JERSEY - Adults now emerging. (Ins.-Dis.-Weed Newsltr., May 15). PENNSYLVANIA - Adults emerging from American holly in Butler County May 12. (Simons).

BOXWOOD LEAF MINER (Monarthropalpus buxi) - DELAWARE - Adults emerging from American boxwood in New Castle County. (Kelsey).

A JUNIPER TIP MIDGE (Oligotrophus sp.) - INDIANA - Heavy in juniper near Indianapolis, Marion County; adults have been emerging in large numbers since April 30. (Schuder).

ROSE-SLUG (Endelomyia aethiops) - MISSOURI - Abundant on roses in central area. (Wkly. Rpt. Fr. Grs.).

SPRUCE SPIDER MITE (Oligonychus ununguis) - NEW YORK - Active on junipers in nursery near Smithtown, Suffolk County, May 7. (N. Y. Wkly. Rpt.). MARYLAND - Caused heavy injury to hemlocks and Norway spruce on several properties in Prince Georges County. (U. Md., Ent. Dept.).

SPIDER MITES - ARIZONA - Heavy populations damaging various ornamental plantings, especially evergreens, over the State. (Ariz. Coop. Sur.). OKLAHOMA - An undetermined species noted on young sweetpea plants in Stillwater area, Payne County; also reported on ornamentals in Cotton County area. (Okla. Coop. Sur.). MARYLAND - Undetermined species infesting arborvitae at Rockville, Montgomery County, and street maples at Glennridge, Prince Georges County. (U. Md., Ent. Dept.). DELAWARE - Unspecified species abundant on Boston ivy on houses in several areas of Sussex County. (Burbutis). Heavy infestation of Eurytetranychus buxi found on boxwood at Newark, New Castle County. (Connell).

INSECTS AFFECTING MAN AND ANIMALS

A SAND FLY (Culicoides blantonii) - TEXAS - A male and female collected in a light trap at a residence 6 miles northeast of Brownsville, Cameron County, by R. B. Eads on February 19, 1962. Det. by W. W. Wirth. This is a new United States record. (Gaines).

SAND FLIES - UTAH - Unspecified species seriously annoying to residents in Grantsville-Dolomite area, Tooele County, and in area northwest of Salt Lake City. (Knowlton, Collett). WISCONSIN - Unspecified species a problem in Wood County. (Wis. Ins. Sur.). MARYLAND - Culicoides spp. causing considerable annoyance to humans at Whitehaven, Wicomico County. (U. Md., Ent. Dept.).

LAKE MIDGES (Tendipes spp.) - WISCONSIN - Mostly T. plumosus, began emerging in Lake Winnebago area May 10. Populations heavy, but less severe than in 1961. Emergence date of T. plumosus is 2 days earlier than in 1961. (Wis. Ins. Sur.).

MOSQUITOES - UTAH - Moderately annoying at Tooele, Grantsville and Burmeister, Tooele County. More treatment than usual has been necessary this spring in Salt Lake County. (Collett, Knowlton). NEBRASKA - Culiseta inornata abundant in north central part of State. (Rapp). NORTH DAKOTA - Aedes spencerii emerged in Cass County; fourth stage larvae of Aedes flavescens collected May 17; no Aedes vexans

larvae collected to May 18. (Noetzel). Culiseta inornata adults collected in light trap at Fargo, Cass County; Aedes dorsalis adults present in Richland County. (Frye). WISCONSIN - Adults of unspecified species emerging in greater numbers, particularly in northern part of State. Larval counts in Dane County show good potential for Aedes vexans, which should be emerging by May 25. (Wis. Ins. Sur.). ALABAMA - Infestation of unspecified species heavier than usual in Monroeville, Monroe County. (Lemons).

BLACK FLIES - MISSOURI - Isolated infestations of Simulium spp. observed in west central and northwest areas; in northwest, S. vittatum feeding on heads of laying hens. In west central area, Simulium spp. feeding in ears of horses. (Munson, Thomas, Wood). KANSAS - Simulium vittatum abundant on cattle resting under trees in shelter belts along a creek in Stafford County (south central). (Downe). NEBRASKA - High populations of undetermined species present in Saline County. (Rapp). WISCONSIN - Unknown species a problem in wooded areas in Calumet County and in area near Arena, Iowa County. (Wis. Ins. Sur.). RHODE ISLAND - Undetermined species continue troublesome in rural areas. (Mathewson, Kerr, Hyland).

HOUSE FLY (Musca domestica) - VERMONT - Populations building up rapidly in all areas. (MacCollom). ALABAMA - Becoming more of a problem around homes in Chilton County. (Buttram). OKLAHOMA - Populations continue light in Stillwater area, Payne County; only light populations observed in Marietta area, Love County. (Okla. Coop. Sur.). UTAH - Numerous about some farms in Tooele-Grantsville area, Tooele County. (Knowlton, Collett).

FACE FLY (Musca autumnalis) - VERMONT - Low numbers observed on cattle in most areas. (MacCollom). PENNSYLVANIA - Plentiful about cattle in York County. (Pepper). INDIANA - Averaged less than one per head in Grant County, eastern area. (Dobson). Remains low in Tippecanoe County; averaged 2-7 per animal. (Laemmlen). ILLINOIS - Ranged 0-11 (averaged 3.6) per face on herds in northeast district; 0.5-1.5 (averaged 0.9) in central district; and 0-0.1 (averaged 0.03) in west-southwest district. (Ill. Ins. Rpt.).

HORN FLY (Haematobia irritans) - TEXAS - Numerous in most parts of State; farmers continue to apply controls. (Texas Coop. Rpt.). OKLAHOMA - Populations in Stillwater area, Payne County, remain about same as previously reported. Counts of 150-400 per head on cows common throughout south central area; increasing populations reported in Ottawa County, northeast area. Activity reported throughout State, with 100-150 per head on cows reported in Duncan area, Stephens County. (Okla. Coop. Sur.). ILLINOIS - Averaged 2.9 per animal in northeast district; ranged 0-400 (averaged 46) per animal in central district and 0-500 (averaged 123) in west-southwest district. (Ill. Ins. Rpt.).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 2 per head on dairy animals in Stillwater area, Payne County. Counts of 0-3 per head observed on yearlings at Marietta, Love County. (Okla. Coop. Sur.).

CATTLE GRUBS (Hypoderma spp.) - PENNSYLVANIA - Eggs reported numerous on hairs of dairy cattle in a herd in York County. (Pepper).

BLACK BLOW FLY (Phormia regina) - INDIANA - Nearly full-grown larvae infested dehorned calves in Dubois County, May 3; infested 9 of 76 calves. (Dobson). KANSAS - Unidentified screw-worm reported infesting dehorning wounds in Riley County, week ending May 11, has been determined as this species. (Downe, Pitts, Peters). See CEIR 12(20):498.

BLOW FLIES - OKLAHOMA - Several cases of infestations of Phaenicia sp. in dogs have been recorded in Stillwater area, Payne County. (Okla. Coop. Sur.). UTAH - Unspecified species numerous about some farms in Tooele-Grantsville area, Tooele County. Also extremely numerous about pig farms in Salt Lake County. (Knowlton, Collett).

TABANIDS - FLORIDA - Tabanus vittiger guatemalanus collected in blacklight trap at

Stock Island, Monroe County, April 18. This is the second specimen for the Florida State Collection. (Fla. Coop. Sur.). ARKANSAS - Heavy populations of undetermined species occurred in Yell, Logan and Scott Counties (west central). (Ark. Ins. Sur.). MISSOURI - Tabanus lasiophthalmus feeding around briskets and udders of beef cattle in south central area. (Munson, Thomas, Wood). INDIANA - Tabanus sp. present on cattle in eastern part of State. (Dobson). WISCONSIN - Unspecified species of deer flies particularly annoying in Marinette County near woods. (Wis. Ins. Sur.).

BROWN DOG TICK (Rhipicephalus sanguineus) - ARIZONA - Heavy populations a problem in and around homes in Phoenix area, Maricopa County. (Ariz. Coop. Sur.). OKLAHOMA - Causing concern to some homeowners in Stillwater area, Payne County, by invading homes. (Okla. Coop. Sur.). MISSOURI - Heavy infestations reported in central area. (Munson, Thomas, Wood). MARYLAND - Larvae found in homes in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.).

AMERICAN DOG TICK (Dermacentor variabilis) - OKLAHOMA - Continues to create concern to picnickers in Stillwater area, Payne County. (Okla. Coop. Sur.). MISSOURI - Heavy on horses and other animals in northern portion of State. (Munson, Thomas, Wood). NEBRASKA - Abundant and active in Knox County area. (Rapp). MARYLAND - Occurred on humans at several locations in central and southern sections. (U. Md., Ent. Dept.). RHODE ISLAND - Present statewide. (Mathewson, Cartier, Hannah).

LONE STAR TICK (Amblyomma americanum) - TEXAS - Heavy on cattle and horses and in lawns and wooded areas in Upshur County. (Henry). OKLAHOMA - Populations high on livestock throughout south central area and in eastern third of State. Controls being conducted in these areas. (Okla. Coop. Sur.). MISSOURI - Heavy infestations reported in central area. (Munson, Thomas, Wood).

TICKS - WISCONSIN - Reports from northern counties indicate populations of unspecified species continue to be serious, although no greater than in other years. (Wis. Ins. Sur.).

A SCORPION - MONTANA - Child in Brady, Pondera County, bitten by undetermined species, with little after effects. (Roemhild).

HOUSEHOLD AND STRUCTURAL INSECTS

PAVEMENT ANT (Tetramorium caespitum) - CONNECTICUT - Workers and swarms very much in evidence. (Savos).

CARPENTER ANTS (Camponotus spp.) - MICHIGAN - Reproductives repeatedly reported within past 2 weeks from Benton Harbor, Detroit, Grand Rapids and Lansing. (Hutson).

CARPENTER BEES - VIRGINIA - Undetermined species present in home and caused some damage to redwood boards. (Amos, May 8). MARYLAND - Xylocopa virginica active in porch bench at Spencerville, Montgomery County, April 30. (U. Md., Ent. Dept.).

EARWIGS - ALABAMA - Unspecified species causing concern throughout Chilton County about homes. (Buttram).

A FALSE CHINCH BUG (Nysius sp.) - ARIZONA - Heavy, nymphal populations moving into some Phoenix area, Maricopa County, housing areas located near desert. (Ariz. Coop. Sur.).

INDIAN-MEAL MOTH (Plodia interpunctella) - MICHIGAN - Infestations in households more common. (Hutson).

EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) - CONNECTICUT - Reproductives swarmed in buildings and homes since January; peak April 20 to May 10. More

than 60 identifications made, over 75 other cases reported. Majority of cases from southern half of State and Connecticut River Valley. Recent additional reports from Hartford, Hartford County. (Johnson). PENNSYLVANIA - Infested home at Harrisburg, Dauphin County. (Balsbaugh). Caused some damage to home in Indiana County. (Udine). Damage to flooring of building in Williamsport, Lycoming County, probably caused by this species. (Pa. For. Pest Rpt., May). RHODE ISLAND - Appearance of alates causing statewide inquiries. (Mathewson, Cartier, Hannah).

A SUBTERRANEAN TERMITE (Reticulitermes tibialis) - OKLAHOMA - Continues to swarm occasionally in Stillwater area, Payne County. (Okla. Coop. Sur.). MONTANA - Infested house in Mills City, Custer County. (Roemhild).

CLOVER MITE (Bryobia praetiosa) - NEW YORK - Numerous reports from Horseheads area, Chemung County. (N. Y. Wkly. Rpt., May 14). NEW JERSEY - Continues present in State. (Ins.-Dis.-Weed Newsltr., May 15). PENNSYLVANIA - Swarmed over sides of house at Galeton, Potter County. (Pa. For. Pest. Rpt., May). MARYLAND - Common on porch of home in Baltimore. (U. Md., Ent. Dept.). VIRGINIA - Nuisance in home in Richmond, Henrico County. (T. L. Bissell, May 3). WISCONSIN - Generally a nuisance throughout State in homes. (Wis. Ins. Sur.). MONTANA - Scattered reports indicate general nuisance statewide in homes. (Roemhild).

PSEUDOSCORPIONS - MONTANA - Several houses in area east of the mountains invaded. (Roemhild).

A MILLIPED (Narceus americanus) - VIRGINIA - Common around home in Richmond, Henrico County. (T. L. Bissell, May 3).

STORED-PRODUCT INSECTS

LESSER GRAIN BORER (Rhyzopertha dominica) - NEVADA - Light infestation occurred in milo and mixed feed in small mill-feedstore in Overton, Clark County; this is first record for county and second record for State. (Bechtel).

BENEFICIAL INSECTS

LADY BEETLES - NORTH DAKOTA - Adults of Hippodamia convergens and H. glacialis present in alfalfa in Richland and Sargent Counties; 2 per 10 sweeps. (N. D. Ins. Sur.). SOUTH DAKOTA - Unspecified species ranged 10-30 per 100 sweeps. (Hintz). Observed active in winter wheat plots. (Howe). Coleomegilla maculata fuscilabris and H. convergens ranged 10-12 and 15-18, respectively, on sticky boards at Northern Grain Insect Research Laboratory, Brookings, Brookings County, May 14-15. (Spawn, Hintz). WYOMING - Counts of several species averaged 10 per 100 sweeps in small grains and 20 per 100 sweeps in alfalfa in Goshen, Niobrara, Crook, Weston, Campbell and Sheridan Counties. (Fullerton). IDAHO - Numerous species ranged 1-5 per sweep in alfalfa in Lewiston and Lapwai areas. (Kambitsch, Portman, Halfhill). UTAH - Various species becoming numerous in alfalfa at Tootle and Grantsville where pea aphid (Macrosiphum pisi) becoming moderately abundant. Very abundant in alfalfa in Delta and Millard Counties. (Knowlton). KANSAS - Egg masses numerous on apple trees in Doniphan County, mainly H. convergens on May 7. (Eshbaugh). Larvae very numerous and active on alfalfa in southeast and east central areas; counts up to 5 adults and 15 larvae per sweep. Many fields had only trace of aphids due to lady beetle activity. (Peters). OKLAHOMA - Several species ranged light to heavy on all crops and ornamentals throughout State. (Okla. Coop. Sur.). ILLINOIS - Adults of several species averaged 212 per 100 sweeps in northeast and averaged 103 in east districts on clover and alfalfa. Larvae varied 0-600 (average 212) per 100 sweeps in clover and alfalfa in east district. (Ill. Ins. Rpt.). PENNSYLVANIA - Chilocorus stigma destroyed 90 percent of pine needle scale (Phenacaspis pinifoliae) in Lycoming County. (Gesell, May 10). VIRGINIA - Adult Anatis quinquedecimpunctata collected from Bedford, Bedford County. (Tarpley). Larvae of undetermined species collected

on alfalfa in Charlottesville, Albemarle County. (Tarpley, Smith, May 11). Olla abdominalis var. sobrina collected from willow oak infested with oak lecanium (Lecanium quercifex) at Crewe, Nottoway County. (Tarpley, Schilling, May 7).

HONEY BEE (Apis mellifera) - NEW YORK - Pollination conditions mostly poor in Niagara County; some flights occurred on May 6, 7, 10 and 11. Activity good for all apple varieties in Ulster County. (N. Y. Wkly. Rpt., May 14). RHODE ISLAND Strong colonies building swarm cells in Kingston, Washington County; unconfirmed report of first swarm. (Mathewson). CONNECTICUT - Swarming occurring in many parts of State. (Savos).

DAMSEL BUGS - UTAH - Nabis alternatus present on alfalfa in Tooele and Grantsville, Tooele County. (Knowlton). ILLINOIS - Nabis sp. varied 0-200 (average 87) per 100 sweeps in clover and alfalfa in northeast district and 0-150 (average 47) on same plants in east district. (Ill. Ins. Rpt.). NORTH DAKOTA - N. roseipennis present in alfalfa in southern Richland County; 15 per 10 sweeps. (N.D. Ins. Sur.).

FLOWER FLIES - TEXAS - Larvae of Baccha sp. very common on cotton in Nueces County. (Texas Coop. Rpt., Nolan, Sublett, Wendleton). UTAH - Unspecified species becoming numerous in Tooele and Grantsville alfalfa where pea aphid (Macrosiphum pisi) is becoming moderately abundant. (Knowlton). ILLINOIS - Larvae observed in small numbers in east, central, west and northwest districts in clover and alfalfa. (Ill. Ins. Rpt.).

MISCELLANEOUS INSECTS

PERIODICAL CICADA (Magicicada septendecim) - VIRGINIA - Severe in Albemarle County; widespread from Scottsville to Gordonsville (Smith); several occurrences reported near Manassas, Prince William County; also present at Triangle in southeastern part of County (Grove); adults medium to severe in spots throughout Fluvanna County; present by thousands in some parts of county, lesser numbers present in other areas (Watts). Reported present in Prince William, Spotsylvania, Prince Edward, Appomattox, Henrico, Albemarle and Fluvanna Counties to May 19. (Tarpley). MARYLAND - First adults appeared May 15 at West Annapolis, Anne Arundel County; 25 males and females collected. (U. Md., Ent. Dept.). PENNSYLVANIA - Appearance due about June 1 in 18 eastern counties viz. Pike, Luzerne, Monroe, Carbon, Schuylkill, Lehigh, Dauphin, Lebanon, Potter, Lancaster, Berks, Bucks, Montgomery, Chester, Delaware, Northampton, Wyoming and Philadelphia. This brood is one of 9 in State and last appeared in 1945. (Pa. For. Pest. Rpt., May). CONNECTICUT - Presently tunnelled to surface in areas of known distribution. (Savos). LOUISIANA - Heavy, isolated infestations of Brood XXII, 13-year race, occurring in Baton Rouge area. Continuous droning of adults caused considerable annoyance to residents; thousands of nymphal casts seen in areas of emergence. (Dry, Cancienne).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - FLORIDA - Collections made in 6 townships in Pinellas County and 3 townships in Polk County; det. J. A. West. (Fla. Coop. Sur.).

WESTERN HARVESTER ANT (Pogonomyrmex occidentalis) - UTAH - Active and keeping farm and range areas cleared in parts of Tooele County; becoming a serious pest. (Knowlton).

A SCARAB BEETLE (Anomala binotata) - MARYLAND - Adults coming from soil appeared at lights in Centreville, Queen Annes County. (U. Md., Ent. Dept.).

A MAY BEETLE (Phyllophaga tristis) - NEW YORK - Adults collected in Chemung County. (N. Y. Wkly. Rpt., May 14).

JAPANESE BEETLE (Popillia japonica) - PENNSYLVANIA - Larvae almost full grown in Westmoreland County; early emergence anticipated. (Yackley).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - Full-grown larvae collected

from garden soil in Chemung County. (N. Y. Wkly. Rpt., May 14).

FRUIT FLIES - FLORIDA - PAPAYA FRUIT FLY (Toxotrypana curvicauda) collected in Steinertrap in Miami, Dade County, May 4. (Fry). Anastrepha nigrifascia collected in McPhail trap at Key West, Monroe County, May 10. (Forsyth).

SEED-CORN MAGGOT (Hylemya cilicura) - VIRGINIA - Adults common at Newport News on several ornamental plants; all specimens collected apparently killed by fungus disease. (Amos, McBride).

SALT-MARSH CATERPILLAR (Estigmene acrea) - TEXAS - Heavy, local infestations attacking various broadleaf plants in Coke County. (Lindsey). DELAWARE - Adults fairly common in blacklight trap in Sussex County. (Burbutis).

SPICE-BUSH SWALLOWTAIL (Papilio troilus) - PENNSYLVANIA - Numerous adults flying in Cumberland County. (Balsbaugh).

WHITE-LINED SPHINX (Celerio lineata) - UTAH - Adults more numerous than for several years in northern part of State. (Knowlton).

MILLIPEDS - WISCONSIN - Unspecified species caused considerable concern in Dane County; although uncorroborated, there is indication that some sod injury occurred. (Wis. Ins. Sur.).

CORRECTIONS

CEIR 12(19):453 - MEADOW PLANT BUG (Leptopterna dolabratus) - Delete note for Wisconsin. Should read: MEADOW SPITTLEBUG (Philaenus spumarius) - WISCONSIN - Eggs hatched in alfalfa in Rock and Marquette Counties. (Wis. Ins. Sur., May 4).

CEIR 12(19):460 - Sixth line from bottom of page: CITRUS RUST MITE (Panonychus citri) should read CITRUS RED MITE (Panonychus citri).

CEIR 12(20):498 - A SCREW-WORM - KANSAS - Larvae of undetermined species infesting dehorning wounds in Riley County, have been determined as BLACK BLOW FLY (Phormia regina). (Downe, Pitts, Peters).

CEIR 12(20):479, 494 - A MINING SCALE (Pseudaonidia claviger) should be Pseudaonidia clavigera.

ADDITIONAL NOTES

CALIFORNIA - Heavy, larval populations of VARIEGATED CUTWORM (Peridroma saucia) occurred in alfalfa and barley in Santee, San Diego County. Medium, larval infestation of WHITE-LINED SPHINX (Celerio lineata) on corn leaves in Elsinore, Riverside County. Normally this is not a corn pest. Medium, local infestations of FULLER ROSE BEETLE (Pantomorus godmani) occurred on strawberry roots in Watsonville area, Santa Cruz County. Heavy populations of MEALY PLUM APHID (Hyalopterus pruni) occurred on prune trees in Plymouth, Amador County. Heavy, adult populations of PACIFIC SPIDER MITE (Tetranychus pacificus) on apple leaves and fruit in Concord, Contra Costa County. DRIED-FRUIT BEETLE (Carpophilus hemipterus) and a SCARAB (Hoplia oregona) occurred in medium infestations on orange blossoms in Fresno, Fresno County. A CEPHID (Hartigia cressonii) caused medium damage to boysenberries in Redding, Shasta County. Heavy populations of ARMY CUTWORM (Chorizagrotis auxiliaris) larvae occurred under apple trees at Benton Inspection Station, Mono County, and on prune foliage in Wheatland, Yuba County. Heavy, adult populations of a THRIPS (Frankliniella occidentalis) occurred on strawberry flowers in Santa Maria, Santa Barbara County. Heavy populations of a SOFT SCALE (Lecanium kunoensis) noted on pyracantha, apple and plum

in Paradise, Butte County; populations local and not widespread. Adult ORIENTAL FRUIT MOTH (Grapholitha molesta) appeared on peach trees in Delhi, Merced County. Medium, larval populations of DIAMONDBACK MOTH (Plutella maculipennis) infested cabbage leaves in Watsonville, Santa Cruz County. VARIEGATED CUTWORM (Peridroma saucia) and VEGETABLE WEEVIL (Listroderes costirostris obliquus) locally heavy on lettuce in San Diego, San Diego County. Medium infestation of OBSCURE SCALE (Chrysomphalus obscurus) found on 2 specimen trees of scarlet oak and in varying infestations from light to extremely heavy on pin oak in Capitol Park, Sacramento, Sacramento County. This pest subject to survey and investigation with eradication consideration. Heavy populations of GREAT BASIN TENT CATERPILLAR (Malacosoma fragile) defoliating Prunus andersoni on Highway 295, four miles north of Toms Place, Mono County. In previous years, disease has been important control factor in area. M. constrictum now occurring on oak trees in Livermore, Alameda County. A GEOMETRID MOTH (Coryphista meadii) larvae caused medium damage to Oregongrape in St. Helena, Napa County; native stands of this shrub badly eaten most years. A PIT SCALE (Asterolecanium arabidis) caused medium to heavy, local infestations on Pittosporum sp. in Chico, Butte County. Heavy, adult populations of POPLAR PETIOLE GALL APHID (Pemphigus populitransversus) occurred on nursery-stock cottonwoods in Norco, Riverside County. Adults of ROSE CURCULIO (Rhynchites bicolor) appeared on rose flowers in several locations in northern part of State. Adults of a SCARAB (Hoplia sp., probably oregona) occurred in gardens in Salinas, Monterey County, and on apple blossoms in Daly City, San Mateo County. Populations in other areas decreasing, particularly in interior areas. Heavy, nymphal infestations of a PSYLLID (Psylla uncatoides) occurred on Albizia julibrissin in Fresno, Fresno County. Light populations of adult HUMAN FLEA (Pulex irritans) and CAT FLEA (Ctenocephalides felis) occurred in residence in La Grange, Stanislaus County. A BITING MIDGE (Leptoconops kerteszi) annoyed man and cattle in Pond area, Kern County. PACIFIC COAST TICK (Dermacentor occidentalis) annoyed people in Capell Creek, Napa County. Heavy, adult populations of a POWDER-POST BEETLE (Lyctus cavicollis) occurred in ash cabinet wood in Hayward, Alameda County. Usually, infestations appear after cabinets and trim are installed. Medium populations of a PARASITIC BRACONID (Aphidius pisivorus) present in seed alfalfa fields in Five Points, Fresno County. A SYRPHID FLY (Metasyrphus wiedemanni) and an unspecified ANTHOMYIID FLY noted in heavy populations on avocado blossoms in Fallbrook, San Diego County; probably partially responsible for pollination of avocados. (Cal. Coop. Rpt.).

MASSACHUSETTS - ALFALFA WEEVIL (Hypera postica) ranged 0-5 larvae per tip in Norfolk County, mainly second and third instars; overwintering adults active in Hampshire County. Few larvae of CLOVER LEAF WEEVIL (H. punctata) taken with above. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) and STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) damaged strawberry in Barnstable County. CRANBERRY WEEVIL (Anthonomus musculus) appeared on blueberry blossoms in Plymouth and Falmouth. (Tomlinson). Larvae of EYE-SPOTTED BUD MOTH (Spilonota ocellana) noted more generally in apple orchards than during recent years. Up to 60,000 acres expected to be 50 percent defoliated by GYPSY MOTH (Porthetria dispar) mainly in Hampden, Hampshire and southern Berkshire Counties. Other smaller, but heavily infested, areas in Franklin County, all in areas highly susceptible to this pest. Strong, persisting winds during and after hatching undoubtedly caused wide distribution of young larvae. (Hood). A PINE TIP MOTH (Rhyacionia sp.) emerged from red pine terminals at Wareham, Plymouth County. (Tomlinson). AMERICAN DOG TICK (Dermacentor variabilis) noted as common throughout southeastern part of State. (Wheeler).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. ips.	Feltia subterr.	Perid. saucia	Prod. ornith.	Protoparce sexta	quinq.	Heliothis zea	vires.
ARIZONA									
*Yuma 5/10-16			38					6	
ARKANSAS									
Hope 5/10-16		2		2					
Morrilton 5/10-16	5	7						1	
Kelso 5/10-16	5	6		6					
Fayetteville 5/10-16	1							1	
CALIFORNIA									
Shafter Exp. Sta. 5/10-16	5	36	7	6				1	
COLORADO									
New Liberty 5/11-18		3		1				14	
Two Buttes 5/11-18	62			455			1		
Dolores 5/11-18		1					2		
FLORIDA									
Quincy 5/14			5						
ILLINOIS (County)									
Champaign 5/11-17	214	16		1					
INDIANA (Counties)									
Lawrence 5/7-11	15			1					
La Porte 5/9-14	45	5							
Tippecanoe 5/10-16	22	4							
Vanderburgh 5/10-16	19	3		5					
KANSAS									
Garden City 5/8-11	65	9		10				4	
Hays 5/11,15	14	1			4				
Manhattan 5/11-17	4			1	2				
Mound Valley 5/9	2	1		2	2			1	
Wathena 5/12-13	11	4							
MISSISSIPPI									
*Stoneville 5/11-17	15	27	6	2	40	12		11	
NEBRASKA									
Scotts Bluff Exp. Sta. 5/7-14		1		4					
North Platte 5/3-10	39	4		73				1	
Kearney 4/30-5/10	10	3		8					
McCook 5/9-10	1			5					
NORTH DAKOTA									
Fargo 5/14-18	1								
SOUTH CAROLINA									
Clemson 5/12-18	5		3	2	17	2	2	10	
Charleston 5/7-13	5	9	3	1	7	2	1	5	1
SOUTH DAKOTA (County)									
Brookings 5/12-18	29								
TEXAS									
Waco 5/12-18	7	5	6	8	19			24	
Brownsville 5/4-16	4	20	390	11	8	2	32	77	

* Three traps - Yuma; 2 traps - Stoneville.

(Continued on page 537)

LIGHT TRAP COLLECTIONS (continued)

	Pseud. unip.	Agrot. ips.	Feltia subterr.	Perid. saucia	Prod ornith.	Protoparce sexta	Heliothis zeae	vires.
WISCONSIN								
Mazomanie 5/8-13		7	2					
Middleton 5/10-16		15	4					
Madison 5/10-16		36	7		4			
Reedsville 5/8-14		5						
Wayside 5/8-14		6	4					

Additional Light Trap Collections

ARIZONA (*Yuma, 5/10-16) - Spodoptera exigua - 3,025.

CALIFORNIA (Shafter Exp. Sta., 5/10-16) - Loxostege sticticalis - 11; Prodenia praefica - 96; Proxenus mindara - 12; S. exigua - 61.

COLORADO - L. sticticalis - (Two Buttes, 5/11-18) - 535; (Dolores, 5/11-18) - 8.

KANSAS - L. sticticalis - (Garden City, 5/8-11) - 314; (Hays, 5/11,15) - 43.

SOUTH CAROLINA (Charleston, 5/7-13) - Conoderus falli - 60.

* Three traps - Yuma.

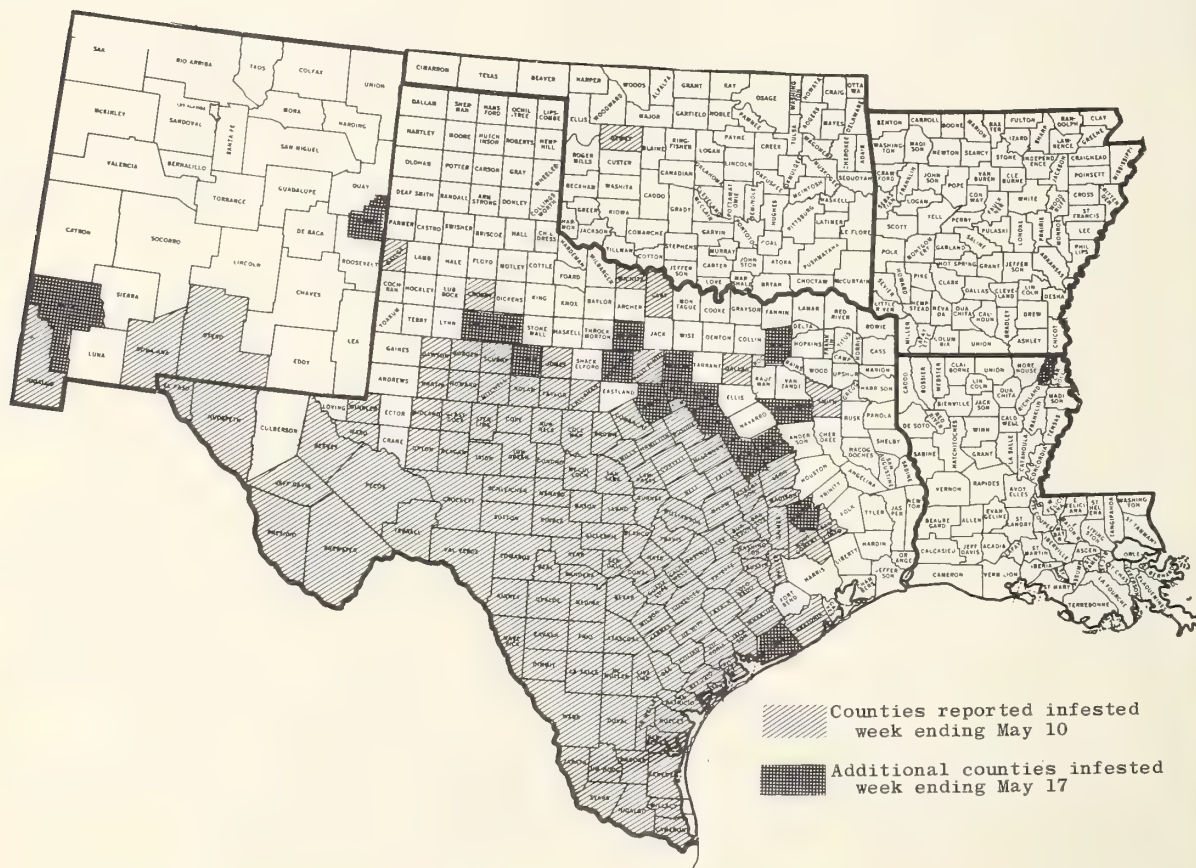
STATUS OF THE SCREW-WORM (*Cochliomyia hominivorax*) IN THE SOUTHWEST, MAY 4-17

The following information has been released by the Animal Disease Eradication Division, Agricultural Research Service, regarding the screw-worm eradication program in the southwestern United States.

During the period May 4-10, 22,818,000 sterile flies were released over an area of 60,442 square miles at the rate of 300-400 flies per square mile. A total of 1,079 screw-worm cases were reported during the period. New counties reporting screw-worm were Bailey, Brazos, Burleson, Callahan, Clay, Dallas, Dawson, El Paso, Falls, Glasscock, Howard, Jones, Leon, Madison, McLennan, Palo Pinto, Smith, Taylor and Washington Counties, TEXAS, and Dewey County, OKLAHOMA.

During the period May 11-17, 21,413,200 sterile flies were released over an area of 54,160 square miles at the rate of 300-400 flies per square mile. A total of 1,204 screw-worm cases were reported during the period. New counties reporting screw-worm were Erath, Fisher, Freestone, Garza, Henderson, Hill, Hood, Johnson, Kent, Limestone, Matagorda, Parker, Stephens, Walker, Young and Hunt Counties, TEXAS; Curry and Grant Counties, NEW MEXICO; and West Carroll Parish, LOUISIANA.

The Mission production facilities for producing sterile screw-worm flies are now expected to be completed about June 16, 1962. The map below shows the infested counties in the 4-state area as of May 17.



STATUS OF SOME IMPORTANT INSECTS IN THE UNITED STATES

PLUM CURCULIO (Conotrachelus nenuphar (Herbst))

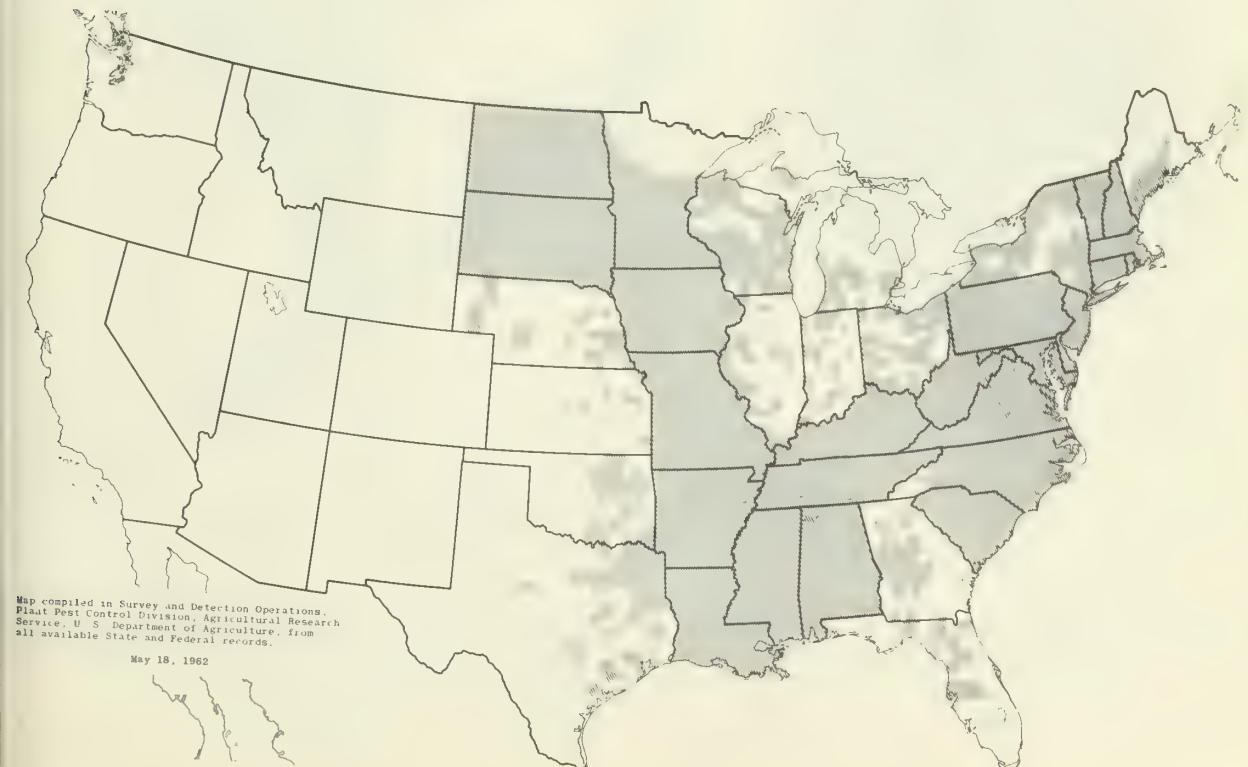
Economic Importance: A native insect, the plum curculio is primarily a pest of stone fruits, but is also an important pest of apples. Oviposition and feeding injury cause heavy fruit drop in peaches and plums, severely deform apples, and the former is a primary cause of "wormy" cherries. Such injury is also one of the main agencies in spreading brown rot fungus of stone fruit. Described by Johann F. W. Herbst in 1797, this weevil has been an important pest in eastern fruit orchards for over 150 years.

Distribution: Canada and the United States (see map below).

Hosts: Particularly injurious to plum, peach, apple and cherry, but also attacks many other stone and pome fruits, both cultivated and wild.

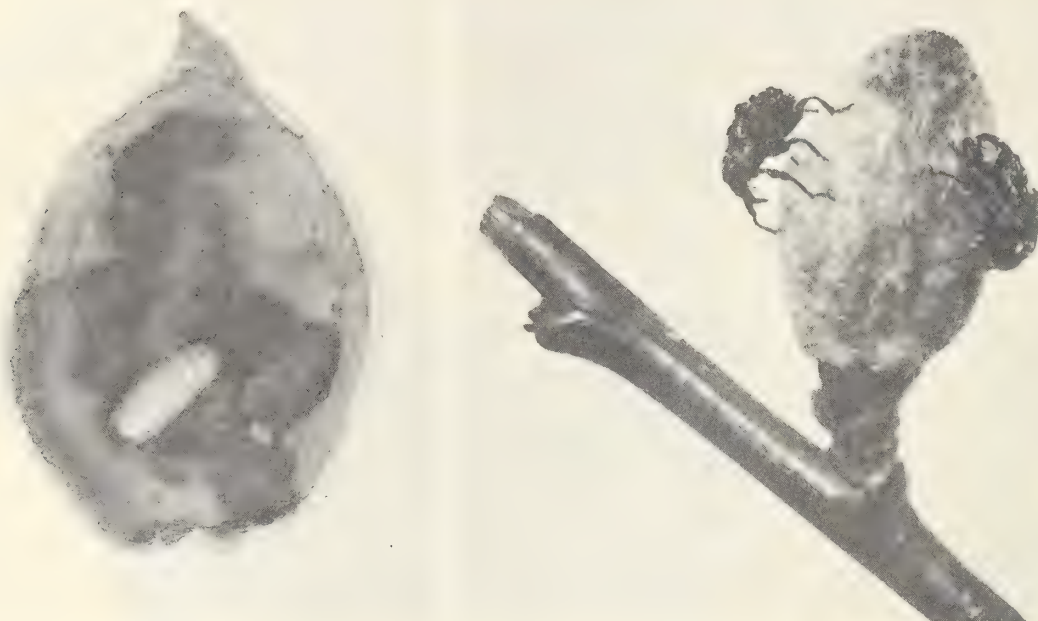
Life History and Habits: Two generations a year usually occur from Virginia southward. In the intermediate zone (latitudes of Delaware to Virginia), a partial second generation has occasionally developed. The more northern area of distribution has but one generation a year. After overwintering under leaves, grass and rubbish in adjacent woodlands or under grass and trash in orchards, the adults leave their hibernating quarters with the approach of warm weather. In the South, this usually occurs before full bloom of peaches and overwintering beetles may be found in numbers by full bloom. In the North, the overwintered adults usually appear in apple orchards about a week after petal drop. In Delaware in 1960, hibernation ended around mid-April and injury was noted in apples and peaches during the second week of May. Larvae appeared in cherries in Door County, Wisconsin, in late May to early June in the 1959 and 1960 seasons.

DISTRIBUTION OF PLUM CURCULIO (Conotrachelus nenuphar (Herbst))



In southern orchards, the overwintered adults begin feeding on the blooms, particularly the calyxes, and to some extent the unfolding leaves. There is usually little feeding injury in northern orchards until growing fruit is available which provides abundant food and a suitable site for oviposition. The injury associated with the egg is very characteristic. The female makes a round incision with her snout and inserts the eggs with her ovipositor. She then makes a crescent-shaped incision in front of the one containing the egg. This second cut undermines the egg and protects it from the rapidly enlarging fruit. Eggs hatch in 2-12 days, depending on the weather conditions, and the larvae in most cases bore toward the center of fruits. Most of the infested young peaches, plums and apples drop to the ground; cherry fruit usually does not drop. The larvae continue feeding in the dropped fruit until fully grown, which usually takes place in 2 weeks or more. The full-grown larva leaves the fruit and enters the soil where it forms an earthen cell a few inches below the surface. Preparation of the soil cell, pupation and adult emergence take 30-35 days. The new adults feed only moderately in northern orchards and may appear too late to cause excessive injury in the South.

Description: EGG - Smooth, shiny, rather elliptical and whitish. LARVA - Full-grown larva about 9 mm. long, yellowish-white with a brown head. ADULT - A curculio, about 4-5 mm. long, brown, mottled with gray and bearing 2 prominent humps and several smaller elevations on the elytra. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 12(21):5-25-62.



Figures of Conotrachelus nenuphar (Herbst)) on peach
Right - Adults, Left - Larva

Major references: 1. Snapp, O. I. 1954. USDA F. B. 1861 (rev. ed.) 8 pp.
2. Taylor, E. P. 1909. Mo. St. Fruit Expt. Sta. (Mountain Grove) Bul. 21, 69 pp.
3. Whitcomb, W. D. 1932. Mass. Agr. Expt. Sta. Bul. 285, 16 pp.

Figures (except map): USDA photographs.

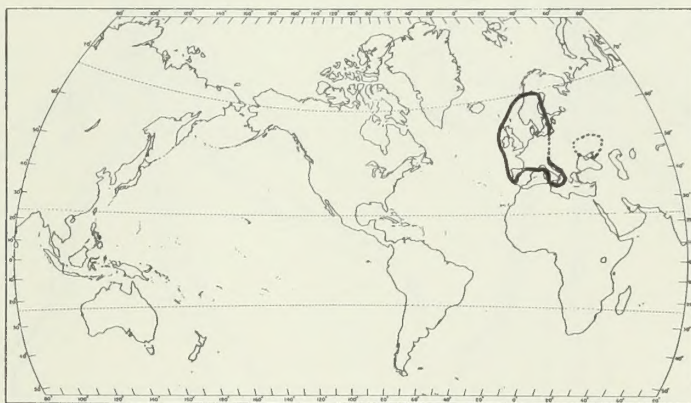
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

SWEDE MIDGE (Contarinia nasturtii (Kieffer))

Economic Importance: Outbreaks of this midge periodically cause extensive damage to several types of crucifers in Great Britain and on the mainland of Europe. Rutabaga is particularly subject to attack in Great Britain. Young crucifers that are under larval attack develop swollen stalks which bend sharply inward across the top of the plant and press upon and compact the terminal bud, while the leaf blades become crumpled. This damage retards the general development of the plant. In addition to this "leaf-crumple" effect, growth of secondary shoots or a "many-necked" condition usually follows. Subsequently, rotting of the crown, neck and bulb sometimes occurs. Larval damage to the flowers of the crucifers can also be serious, especially when the crop is being grown for seed. Only a few seeds develop from infested flowers as they become swollen and remain closed. This species is seldom intercepted at United States ports of entry, only once as far as known, but is generally considered a threat to crucifer production.

Distribution: Widely distributed in Europe, being recorded in Austria (?), Belgium, Czechoslovakia, Denmark, France, Germany, Great Britain, Ireland, Italy, Netherlands, Norway, Portugal, Sicily, Sweden and the USSR (Ukraine).

Hosts: Wild and cultivated crucifers, including rutabaga, cabbage, broccoli, cauliflower, kale, turnip, rape, horseradish, charlock, radish, white mustard, black mustard, tumbled mustard, yellow fieldcress, bog marshcress, pennycress, flixweed tansymustard, sainfoin, Sisbyrium officinale, S. irio, S. orientale, S. loeselii and Camelina microcarpa.

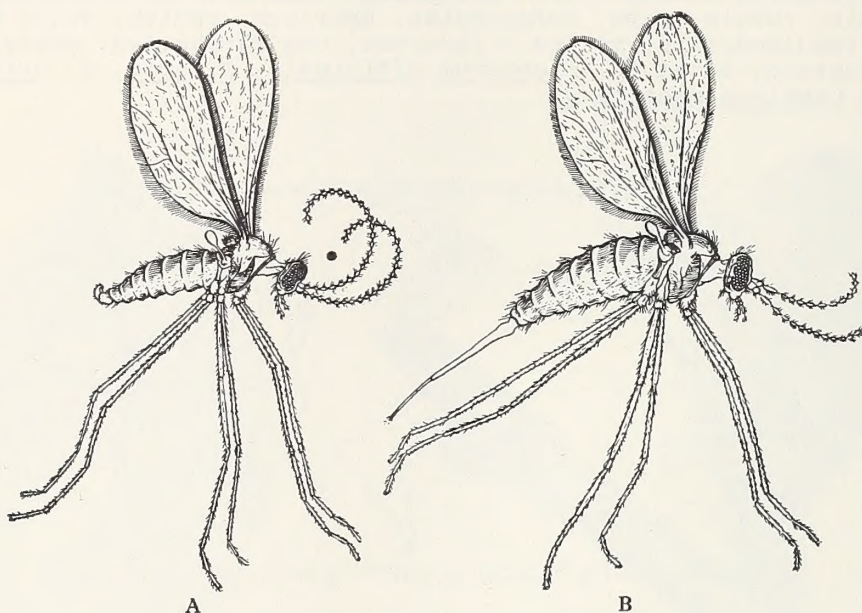


General Distribution of Contarinia nasturtii (Kieffer)

Life History and Habits: Several overlapping generations occur each year; as many as 5 have been recorded in Germany, but 3 is the usual number in most areas. It is generally accepted that the second and third generations are the most destructive. The adults of the first brood appear in England in June and the succeeding broods until September. Eggs are laid on tender parts of host plants; in strings or clusters of 15-20 mostly near the base of the leaf stalks on their upper surface or the younger leaves in the heart of the crown. Some may be found on the leaf blades. Larvae hatch in 3-4 days and feed on the leaf epidermis; they do not mine below the surface. The larval development period is variable, lasting for about two to three weeks depending on the weather conditions. When full fed, larvae descend to the ground and pupate in silken cocoons in the upper

two inches of the soil. The adults of the new generation emerge in one to three weeks, depending on the local and seasonal conditions. The larvae hibernate in a cocoon in the soil and pupate in the spring.

Description: EGG - 0.27 mm. by 0.08 mm., with a pedicel measuring 0.06 mm. **LARVA** - Pale yellow, legless, with power of jumping. A spatula or breast bone is present. Length 2-2.5 mm. **ADULT - Male:** Head - eyes black, broader at top, contiguous, lower part of face, proboscis and palpi whitish; antennae 1.7 mm. long, 2 + 12, the segments simple with one whorl, first flagellar segment without stem, the succeeding segments globular with two whorls. Neck yellow, prothorax and scutellum slate gray, on the latter are two shiny black furrows, running lengthwise, in which are two rows of gray hairs; between the first and second coxa is an oblique patch which stretches sideways as far as the humerus. Wings 1.6 mm. in length, strongly iridescent, long and wedge-shaped at the base. Abdomen lemon-yellow, with some indistinct transverse stripes. **Female:** Antennae 0.8 mm. long, 2 + 12, the first flagellar segment is constricted in the middle and is twice the length of the succeeding ones, which are cylindrical with short stems; ovipositor whitish and capable of considerable extrusion, it is pointed like a needle. Length 1.6 mm. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 12(21):5-25-62.



Contarinia nasturtii (Kieffer) Adults. A, Male; B, Female

Major references: 1. Barnes, H. F. 1946. Gall Midges of Economic Importance. Vol. 1, 104 pp., London. 2. Smith, K. M. 1948. A Textbook of Agricultural Entomology. 289 pp., Cambridge.

Figures (except map) from: Taylor, T. H. 1912. Cabbage-top in Swedes. Univ. Leads & York. Counc. Agr. Educ. No. 82, 21 pp.

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